

How We Eat: Raw, Fruitarian, Alkaline, Fasting, and Vegan

We do intermittent fasting (1 meal a day), auto urine therapy, sun gazing during sunrise and sunset, we flush our anti-depressants and quit psychiatry/therapy, We alkalinize with baking soda aka sodium bicarbonate, Probiotics like wheatgrass, lemon grass, black wallnut extract, as well.

Excerpts From Never Be Sick Again by Raymond Francis.

The four worst food choices, comprising the bulk of the average American diet and

disastrous to the health of our population are:

1. sugar
2. white flour
3. processed oils
4. milk products

And Meat has too much excess protein that we do not need

Some Cooking Methods Can Create Toxins

Once we obtain high-quality foods, we still must prepare them properly. The first step in nontoxic food preparation is to wash or peel foods in order to remove agricultural chemicals, bacteria and molds. Waxed foods (such as most cucumbers, eggplant, turnips and apples) definitely should be peeled, because the wax often is covering surface residues of pesticides and fungicides that are applied before the wax is applied; also, questions abound about the safety of some of the waxes. For foods that cannot be peeled, washing under running water for a minute or two does a relatively good cleaning job; using a pure, liquid castile soap (a mild soap made from olive oil and sodium hydroxide) cleans even better. For foods like lettuce, discard the outer layers and wash the leaves separately. Rinsing briefly in a vinegar solution lowers bacteria levels.

Few people are going to eat 100 percent of their diet raw (I eat about 80 percent of mine raw), but whenever you choose to eat a raw food in place of a highly cooked or processed one, you obtain better nutrition and less toxic exposure. Cook foods lightly. Ideally, food should not be cooked at temperatures higher than boiling water or steam. Foods change fundamentally when they are cooked; they can become more toxic, less nutritious and even more difficult to digest.

Avoid browned or charred foods, which are highly toxic.

Unfortunately, many Americans have developed a taste for charbroiled, toasted or barbecued foods, which develop mutagens that contribute to cancer.

When food is heated above 375 degrees (as it usually is in toasting, frying, grilling, broiling and barbecuing), a number of toxic compounds can be produced, including heterocyclic aromatic amines (HAAs). HAAs are among the most powerful carcinogens ever discovered, and even minute amounts of them can damage your DNA.

The rule of thumb is that the higher the temperature and the longer the cooking time, the more HAAs are formed. Thus, medium rare is safer than well done, and blackened foods are absolutely not acceptable. If ever I am served food that is black,

I cut off the blackened parts. Even toast is dangerous. Experiments at Lawrence Livermore Laboratory showed that a well-toasted piece of bread had 20 percent of the cancer-causing activity of a well-done hamburger. Dosage and frequency are the problems; many people eat several slices of toasted bread or bagel every morning for breakfast, which is like laying out a welcome mat for cancer.

Microwaves: A Fast Track to Trouble

Cooking food is not a good idea, especially at high temperatures, but cooking in microwave ovens may be even worse. While not browning or blackening food like conventional cooking, microwaving changes the chemistry of food fundamentally, lowering nutritional content and producing unique toxins. A lot more goes on inside a microwave than just making things hot. Microwaves “zap” food with enormous amounts of energy—enough to break apart water molecules and cause them to react with the food in ways they would not do otherwise. These reactions create a lot of strange, new molecules that are unnatural to the human body; some of them are toxic and carcinogenic. Research in Switzerland, the former Soviet Union and the United States all suggest that eating microwaved food may promote certain types of cancers, hormone imbalances, lymphatic disorders, digestive disorders, immune and blood abnormalities, emotional problems, permanent brain damage, and even heart disease.

In 1992, at the Swiss Federal Institute of Technology, volunteers who ate microwaved food experienced decreased hemoglobin content of their blood and an increased white cell count. Thus, microwaved food decreases the amount of oxygen available to our cells and stresses the immune system. Also, microwaves have been demonstrated to damage nutrients. Research at the Institute of Radio Technology at Kinsk, in the former Soviet Union, found that microwaves reduce the nutritional content of food by 60 to 90 percent. When reheating food, use the stovetop or oven. Modern foods are already nutrient deficient. Why make them worse by using a microwave?

Use the right cookware. The best pots and pans are those made of glass or ceramics such as Corning Ware. Other materials interact with foods and introduce some level of toxins into the food. Stainless steel contains nickel—both an allergen and a carcinogen. A study in the *Journal of the American Dietetic Association* found

that toxic chemicals from stainless steel pots, including nickel, iron and chromium, enter food during cooking. Aluminum—from pots, pans and aluminum foil—is another toxic contaminant. Teflon coatings on cookware also present problems, especially when such cookware is heated to higher temperatures.

Of course, not all meals come from your own kitchen. Americans eat an enormous percentage of food at restaurants. Making optimal food choices when eating at restaurants is almost impossible. However, with care in menu selection, you can usually do fairly well. As a rule of thumb, upscale restaurants usually have fresher and better prepared foods, while fast-food restaurant offerings are more toxic and less nutritious. Many restaurants do not even “cook” for you; they merely serve prepared and processed foods that are reheated (perhaps in a microwave, so be sure to ask).

Very few restaurants use high-quality organic meats. Bear this in mind the next time you ponder a menu. Deep-water ocean fish is probably your best choice, but only if it is fresh. Fresh-water fish is likely to be contaminated with toxins, and farmed fish are neither nutritious nor free of toxins. When ordering out, I often select large salads or freshly harvested fish, with vegetables. Many restaurants are

willing to make up a vegetarian entrée on request. Avoid anything that is “blackened,” as well as selections containing meat and, particularly, dairy products. Make simple selections, and be able to identify all the ingredients.

What Is in Your Drinking Water?

How do some of the toxins commonly added to municipal water supplies harm your health? About 80 percent of the drinking water in the United States is chlorinated. Chlorine is an extremely toxic and volatile chemical that reacts with organic matter in tap water to form carcinogenic compounds called trihalomethanes. These compounds bioaccumulate in fatty tissues and are capable of causing genetic mutations, suppressing immune function, and interfering with the natural controls of cell growth. Long-term consumers of chlorinated water have been shown to have higher risks of rectal, bladder, kidney, intestinal, liver, pancreatic and urinary tract cancers, as well as spontaneous abortions. The Department of Health Services in California reports that women who drink bottled or filtered water have substantially lower rates of birth defects and miscarriages compared to women who drink tap water. Just opening the tap to wash your hands releases toxic chlorine fumes that, when breathed, damage your health; taking a shower is many times worse. I use a charcoal filter in my shower to filter out the chlorine and organic pollutants. Fluoride is more toxic than lead and only slightly less toxic than arsenic, yet we have been conditioned to believe that fluoride is good for us. Presumably, we put fluoride in our water to prevent tooth decay. Although tooth decay has indeed declined worldwide since the 1970s—an event for which fluoride is often wrongly credited—the real reason for the decline remains unknown, because tooth decay has declined at the same rate in countries that do not use fluoride. Most people are unaware that in more than fifty years of testing and widespread use, no one has ever been able to prove that fluoride is either safe or effective, which is why fluoride has never been approved by the FDA. After half a century of use, the FDA still classifies fluoride as an “unapproved new drug.” Once again, we are guinea pigs in a vast medical experiment gone awry. The truth is, fluoridation of drinking water is making us sick, but no one is ready to admit it because of the almost unthinkable legal liability. Do you think it is a coincidence that toothpastes now have toxicity warnings about their fluoride content? Many young children swallow toothpaste, unless supervised by adults.

The truth about fluoride is gradually being revealed; a number of large-scale studies suggest that fluoride does not prevent and may even cause dental problems. Fluoride bioaccumulates in the body and has been shown to damage teeth, bones, kidneys, muscles, nerves, genes and immune function. In fact, fluoride toxicity is causing diseases such as dental and skeletal fluorosis. Dental fluorosis is a malformation of tooth enamel characterized by brittleness and discoloration, ultimately damaging the health of the teeth. Dentists tell people that fluorosis is “merely” a cosmetic problem. In reality, fluorosis is a sign of systemic fluoride poisoning. More than one out of five U.S. schoolchildren now have some degree of dental fluorosis, and X rays of children with dental fluorosis often show bone abnormalities (skeletal fluorosis) elsewhere in the body. Skeletal fluorosis weakens bones in a manner similar to osteoporosis. Early stages usually are misdiagnosed as arthritis, and advanced stages usually are misdiagnosed as osteoporosis. The minimum crippling fluoride dosage (the dosage that can cause skeletal fluorosis) is 5 milligrams per day for twenty to forty years, according to the National Academies for the Advancement of Science, yet Americans living in fluoridated areas average up to 6.6 milligrams per day!

Fluoride is a powerful enzyme poison that fundamentally damages cell function,

thereby causing disease and death. Mortality rates are higher in fluoridated communities. A 1978 study in the New England Journal of Medicine found that:

“This pattern of a higher crude death rate in the cities with fluoridated water supplies was apparent for all categories of death except for those by accidental means and suicide.” According to Dr. William Marcus, a senior scientist at the EPA, fluoride is the only substance known to cause bone cancer, and bone cancer rates are 80 to 600 percent higher in communities with fluoridated water. Similarly, new research connects fluoride intake to Alzheimer’s disease by implicating a reaction that happens between aluminum and low-dose fluoride. Most home water filters do not remove this toxin. You need to use reverse osmosis or buy bottled water that does not contain fluoride.

Another toxin in our drinking water is arsenic. Arsenic, a contaminant in the chemicals used to fluoridate water, is known to cause cancer and to damage the digestive, cardiovascular, neurological, reproductive and immune systems.

Aluminum salt (alum) is added to water to “purify” it by helping to settle and remove particulate and organic matter. A study in the Journal of Epidemiology

found that the risk of developing Alzheimer’s is increased in individuals who drink water with high aluminum concentrations.

Foods That Tamper with Destiny

No discussion of food toxins would be complete without mention of the potential for poisoning the entire population with genetically modified foods. Genetic engineering is the process of disrupting the genetic blueprints of living organisms by inserting genetic information from other organisms to obtain some “desirable characteristic,” such as resistance to herbicides or insects. These foods are novel and totally unnatural, and we have no idea what the future health consequences may be, yet avoiding genetically modified foods is difficult.

Insertion of genes into genetic material is not a precise process. It is all too easy to obtain unintended results that lower nutritional content, create harmful allergens or lead to the creation of unique toxins. The effects of these toxins may not become known for years, while irreparable harm is being done. The best way to avoid these foods is to eat organically produced foods. (More on this subject in chapter 9, on the genetic pathway.)

Beware of the Air in Your Home

We have already discussed how toxic your food pantry and cupboards may be, but your home—while it may be your castle—may be more like a toxic waste dump. In fact, our greatest exposure to volatile organic compounds occurs in the home.

Toxicity from indoor air pollution affects most Americans’ health to some degree and produces a wide variety of symptoms, including anxiety, depression, fatigue, headaches, poor concentration and mental acuity, and bodily aches and pains. When people complain of these symptoms to their doctor, however, indoor pollutants are almost never suggested as a probable (or even possible) cause.

Learn to recognize toxins in your home.

Seemingly benign items can produce dangerous toxins that pollute your indoor air, such as the off-gasses of mattresses, pillows, televisions, clothes, furniture, carpets and tap water. Toxins from these sources expose us to even higher concentrations than outdoor air pollution. In fact,

the level of indoor pollutants in your home may be hundreds of times greater than outside air. Because most Americans spend about 90 percent of their time indoors, this toxic load can substantially contribute to toxic overload, resulting in disease. As mentioned earlier, I used to suffer from an extreme case of multiple chemical sensitivities, and I was easily incapacitated by exposure to even minute quantities of toxins in my own home. I was able to restore my health only after years of minimizing toxins and improving my nutrition. One of the most profound things I learned from my illness is that all of us are chemically sensitive in varying degrees. This experience led me to research how the fumes from cleansing agents, air fresheners, fragrances and body care products injure our delicate detoxification mechanisms and use up the body's nutrient reserves that are required to operate these systems and prevent toxic damage.

There are multiple sources of indoor pollutants: new carpets, new paint, household cleansers, furniture, mattresses, copy machines, printers, electronic equipment, dry cleaning, newspapers and magazines. Anything you can smell that is not a natural smell is probably toxic. The longer you breathe it, and the more concentrated it is, the more damage it inflicts. Indoor air is a health risk because of the combined effects of multiple toxic sources concentrated in a confined space.

Few people know better the incredible amount of damage that can be done by indoor air pollution than Sally, a young newlywed. Sally was truly "brought" to my office. Her husband had to carry her from their car. She did not have enough energy to walk or even to hold her head up straight while seated. Sally was suffering from acute chronic fatigue, a condition that physicians are not trained to recognize or understand. She and her husband had already spent many thousands of dollars on consultations with physicians and diagnostic tests. Unable to find anything "physically wrong," Sally's doctors referred her to a psychiatrist.

Of course, Sally was not crazy, but she was very sick. Her cells were malfunctioning so badly that she had become totally disabled. The couple's responses to my questions, in addition to my own experience with chemical sensitivity, allowed me to understand what was wrong. First (like most of us), Sally had frequently been given antibiotics throughout her life. (Antibiotics cause fundamental and damaging changes to human physiology.) This intake resulted in a heightened susceptibility to environmental toxins. I asked many questions about Sally's medical history, diet, lifestyle and environment before focusing on the toxin pathway as the most important factor.

Sally was a writer, and her husband had converted their oversize laundry room into an office for her. Also in that room was a gas-fired water heater. Natural gas appliances release toxic gases, including nitrogen dioxide, carbon monoxide and small amounts of the natural gas itself. With insufficient ventilation, the gases became concentrated, and poor Sally was breathing them all day long. She began to suffer from sore throats, eye irritations, respiratory problems, headaches and, eventually, chronic fatigue.

I recommended they install an electric hot water heater. Sally's worst symptoms immediately were alleviated, although significant damage had already been done (both by the gases and the antibiotics). Her health was restored eventually after she worked to reverse the damage through improved diet and nutritional supplementation.

One of the great joys in my life is to watch someone like Sally go from being sick and disabled, with little to look forward to, to smiling once again and enjoying life. I am saddened to think how many people remain sick because their physicians do not understand the toxin pathway and have no idea how to help them. In fact, physicians who prescribe antibiotics and other medications often create susceptibility to such problems in the first place.

Gas-fired appliances (hot water heaters, ovens, stoves, furnaces, fireplaces or clothes dryers) diffuse toxic gases into the surrounding air. If you have such appliances, try to keep them out of your living space and put furnaces, clothes dryers and water heaters in a garage, shed or breezeway along with stored volatiles such as paints and cleaning fluids. A gas stove, because it is in your living space, should be replaced or at least very well ventilated. In my own recovery process, I had to convert from a gas to an electric water heater because I had become so sensitive to these toxins.

Giving off toxic gasses is an especially common problem with products when they are new. At one of my seminars, a woman named Diane raised her hand and explained that she was suffering from splitting headaches. After hearing the story about Sally, Diane realized that her headaches coincided with the purchase of a new car; she suspected a connection. Her new car was off-gassing toxins, producing the “new car” smell. Diane’s family had two cars, so I suggested that she drive the older car until the odor subsided. Her headaches went away. Some highly sensitive people retrofit their cars with safer materials.

Consider the risk of new products: a new carpet, a freshly painted room, a new TV set, a new mattress. New products give off high levels of toxic chemicals. With the passage of time, the volume of toxic chemicals being off-gassed drops dramatically. Often you can accelerate the off-gassing process simply by applying heat. For example, the chemicals contained in a new car’s plastics, adhesives and seating materials pollute the interior air of the car. During the first few months, try to leave a new car parked in the hot sun with the windows up to bake out the toxins. Air it out regularly, and be sure to air it out before and while you drive.

The risk of new paint is something my friend Jim discovered when he went from being generally in good spirits to suffering the worst depression of his life. Actually, he felt suicidal. I immediately tried to isolate the cause of Jim’s malfunctioning cells. I discovered that Jim just had the interior of his house painted; paint off-gasses neurotoxins that can affect moods and mental function. New paint takes at least two months to reach reasonable levels of safety for most people (depending on biochemical individuality), which is why it is best to paint only one room at a time and to close freshly painted rooms off as much as possible while they are off-gassing.

Absolutely do not sleep in a freshly painted room!

A good idea is to

schedule painting just before leaving on a vacation. Jim stayed at his son’s house for several weeks, and his problem was solved.

Another example of toxic off-gassing was brought to my attention when a woman suffering flulike symptoms came to me for help. Ellen Marie had “caught the flu” around Christmas time the previous year and still was not well. Her physicians were dumbfounded, as anyone would be if they focused only on mitigating her symptoms. I discovered that Ellen Marie had moved into a newly constructed luxury home four months prior to coming down with “the flu.” Her new home was constructed with particleboard, which off-gasses formaldehyde—a highly toxic and carcinogenic chemical. Plywood also will off-gas formaldehyde, but far less of it. (Some new man-made building materials no longer contain formaldehyde, but the substitutes used, such as iso-cyanates, are also toxic.) This poor woman was suffering from subtle and constant formaldehyde poisoning. Her symptoms included immune suppression, respiratory problems, coughing, throat irritation, headaches, insomnia, nausea and fatigue. I suggested to Ellen Marie that she sell her new home and move to a safer environment. She chose not to move and she remained ill.

Always select

building materials and furniture that are made from real wood or at least plywood,

but not particleboard.

Inventory Your Home's Hazards

Do you have carpets in your home and, if so, from what are those carpets made? Carpets made from synthetic fibers (plastics such as nylon, acrylic or polyester), especially when new, off-gas large amounts of toxins. Carpets are among the most significant contributors to the toxicity of indoor air. The plastic fibers used to make carpets are very thin, thus creating an enormous amount of surface area from which off-gassing can occur. Chemicals used in the adhesive backing and those in the foam padding underlayer also off-gas. Carpets are treated with toxic soil and stain repellents, moisture repellents, mothproofing and other finishes. These chemicals are effective for their intended purposes, but toxic—an important consideration if you are looking for new floor coverings or considering a move into a newly carpeted space.

That “new carpet smell” is toxic, and the best solution is to use carpets made only of natural fibers

(wool is a good choice, though make sure it is not treated with toxic mothproofing chemicals). Hardwood or tile floors with natural-fiber area rugs are good alternatives.

How about the air quality in your bedroom, which you typically breathe for eight consecutive hours every day? What is the composition of your mattress? We spend one-third of our lives in bed, and spending most of that time immediately next to even mildly toxic chemicals can take a huge toll. Most mattresses today are made of synthetic materials (polyester, polyurethane, treated with dyes, flame retardants, etc.), which can off-gas for years and poison you while you are sleeping.

Fortunately, 100 percent natural mattresses are available. Also, with a doctor's prescription you can obtain mattresses manufactured without toxic flame retardants that otherwise are required by law. At the very least, if you purchase a standard mattress, put it in the garage and allow it to off-gas for a few months before sleeping on it. Also, enclose the mattress with a thin polyethylene drop cloth or a tightly woven barrier-cloth that limits the amount of toxins you breathe nightly. Also, use pillows made from natural materials, such as down.

Next, look in your bathrooms. It's likely that enough toxic chemicals are there to make anybody sick. The toxic products include not only toilet bowl cleaners and air fresheners, but items such as toothpaste, mouthwash, hair spray, cosmetics, shampoo and soap (not to mention the toxic chlorinated water coming out of the tap). All of these products can be replaced with safer, simpler items available in health food stores; they will be equally effective without harming your health.

The laundry room is another toxic site. Detergents, bleach, spot removers and fabric softeners all contain chemicals that are toxic to you and to the environment.

Manufacturers have lulled us into complacency with the term “biodegradable detergents.” This fact has little to do with the eventual health and environmental impact of these synthetic chemicals. Biodegradable means only that at some point the detergent will lose its foaming properties. Purchase unscented products.

Detergents can be replaced with soap-based products, while bleach can be replaced with safer sodium percarbonate or hydrogen peroxide.

Furniture anywhere in the house, but especially in bedrooms, can present significant risks. Today, furniture often is made with toxic synthetic materials (polyester, polyurethane, polystyrene and polyvinyl chloride), which off-gas toxic vapors; likewise, some types of furniture are made of particle-board (which, as already mentioned, will off-gas formaldehyde) and then covered with a wood or plastic veneer. Alarmingly, most children's furniture is made with toxic par-

ticleboard! One study showed that introducing particleboard furniture into an empty house tripled the formaldehyde levels in the air. This problem can be particularly acute in mobile homes, where everything

may be made from particleboard. Buy

furniture made from natural materials, such as solid wood or metal furniture; if this option is too expensive, consider used furniture made of these materials.

Even the clothes you wear can be toxic. Have you ever gone into a clothing store and noticed the chemical-laden atmosphere? Most clothes today contain or are made of toxic synthetic fibers (such as nylon, polyester, acrylics and spandex), which will affect you adversely as you wear them and also contribute to toxic indoor air.

Clothes are often treated with dyes, formaldehyde finishes (permanent press), and mothproofing pesticides. Dry cleaning clothing brings toxins into your household and close to your body; clothes that have been dry-cleaned should always be aired out before they are put into a closet or worn. Laundry detergents and fabric softeners can also be problematic; in fact, many people are quite sensitive to detergent residues. Have you ever walked down the detergent aisle at the grocery store and had your eyes, nose or throat feel irritated? Toxins in those boxes are off-gassing. When washing your clothes, use environmentally friendly and unscented laundry products available in health food stores. Do not use scented fabric softeners. These products might make your clothes smell "fresh and clean," but that smell is toxic.

Buy clothes

made of natural materials, such as wool and cotton, and use natural cleaning products.

After you have taken steps to reduce or eliminate products that are toxic, make

sure to also

keep your home or office well ventilated. Modern homes and office buildings are built a lot "tighter" than older construction to save on energy costs. While reducing energy waste is a good thing, reducing air circulation allows pollutants to accumulate to higher concentrations. For this reason, high-quality air filters (that will filter out both particulate matter and gaseous hydrocarbons) can be helpful. Use them in rooms where you spend a great deal of time, such as your office or bedroom.

Obvious as it sounds, the most important thing you can do to keep your indoor air clean is to stop introducing pollutants in the first place. Before you purchase something new, consider if that product might contribute to your indoor pollution.

As mentioned earlier, after you buy something, give it a chance to off-gas before you put it in your living environment. When I purchase a new television or computer monitor, I put it in the garage, turn it on and leave it there until I can no longer detect an odor. Hang your dry-cleaning outdoors or in a well-ventilated area until you can no longer detect an odor. Do not use products that have powerful chemical odors, such as mothballs or air fresheners. Use heat or sunshine to help expedite the off-gassing process, whenever possible.

Health and Beauty Products That Fail

Your skin provides enormous protection from microorganisms, such as germs, but skin also is designed to be permeable, allowing certain molecules in and out, which is good news when the skin allows antioxidants in to protect against the sun and allows toxins out through the sweat and oil glands. However, easy access also allows environmental toxins to penetrate.

Personal care products are the largest source of toxic absorption through the skin and mucus membranes. One study found that 13 percent of the commonly used cosmetic preservative BHT (butylated hydroxytoluene) is absorbed by your skin.

Chemicals found in everyday personal products such as perfume, cologne, shaving cream, skin lotions, aftershave, toothpaste, soaps, shampoos, deodorants, nail polish, all types of household cleansers and so forth, can be absorbed quickly and produce effects that are toxic or even carcinogenic, especially when these toxic substances are combined.

When I was suffering from severe chemical sensitivities, I found, much to my surprise, that the brands of toothpaste, shampoo, deodorant and skin lotion that I was using were all quite toxic. Products such as lotions, conditioners and makeup, especially when left on the skin for long periods of time, expose you to significant amounts of toxins, which can bioaccumulate, poison your cells and cause disease. Most common products sold to preserve and protect the skin in fact actually contain chemicals capable of damaging the skin.

internally can be a serious problem, worse than anything from the outside world. When these internal toxins are produced excessively or cannot be properly detoxified, they build up in the body and cause disease. In almost any chronically ill person, internally generated toxins play a major role.

When toxins are generated in the digestive system (intestinal toxemia), they enter our bloodstream, and if these toxins are present in excess of the liver's ability to detoxify them, they damage cells all over the body. Intestinal toxemia has been associated with AIDS, allergies, asthma, cancer, cardiac arrhythmias, arthritis, eye problems, high blood pressure, mental problems, headaches, various gastrointestinal conditions, senility, skin problems and other diseases. In my own disease process, the internal toxins I was producing were, indeed, a major contributor to my own physical and mental debilitation.

Intestinal toxemia was the "mysterious" ailment plaguing Michael, who had just completed his junior year at Harvard and had gone off to Europe for the summer with friends. As he was traveling around, he began to feel ill, dizzy and fatigued. He went to see a physician in London who prescribed a drug that did not help. Michael saw other physicians in Germany and Switzerland, but he finally returned home—too sick to remain abroad.

A strapping twenty-one-year-old college student should be at the peak of health. Instead, Michael was suffering from debilitating fatigue, he was lightheaded and dizzy, and he had visual disturbances, not to mention various aches and pains. After many thousands of dollars worth of testing (including a brain scan to check for a brain tumor), Michael's physicians were at a loss to explain his condition and referred him to a psychiatrist. Desperately concerned for her son's future and furious with a medical system that was obviously not working, Michael's mother looked for other options; at that point, she called me.

As with any sick person, I knew exactly what was wrong with Michael: his cells were malfunctioning because of a combination of deficiency and toxicity. The question, as always: How to restore his cells to healthy function? I used the six pathways as a guide and eventually discovered that digestive toxins—a critical aspect of the toxin pathway—were the source of Michael's problems.

Digestive toxins are produced in a couple of ways, notably by an abnormal growth of bacteria or yeast in the intestines and by improperly digested food, which putrefies in the digestive system. Intestinal toxemia creates highly poisonous toxins as well as nutritional deficiency. When bad bacteria and yeasts overgrow, they displace the friendly bacteria necessary for producing nutrients such as the B-complex vitamins, vitamin B

12

and vitamin K. Friendly bacteria also help to obtain the nutrients we need from the food we eat. Intestinal toxemia causes deficiency and

toxicity in most of us, to some degree, because of damage from antibiotics. Michael had acne as a teenager. His dermatologist had prescribed an antibiotic (tetracycline), and Michael had taken this drug every day for years. Antibiotics were developed to kill bacteria. The problem is that helpful bacteria in your intestines (normal intestinal flora) are needed for good health. Years of taking antibiotics destroyed these helpful bacteria in Michael's digestive system. (Even one course of antibiotics can have this effect.) This situation allowed the overgrowth of abnormal intestinal flora and a yeast called *Candida albicans*.

A yeast infection can produce toxic chemicals that absorb into the bloodstream; also, yeast can physically invade and damage the intestinal tissue in a way that allows other inappropriate materials (undigested food particles, toxic wastes and yeast byproducts) to pass directly into the bloodstream. This condition floods the body with dangerous toxins and allergens, causing food allergies and disrupting the immune system. Some of these toxins are neurotoxic (causing damage to the brain and the nervous system) and may produce symptoms such as fatigue, headaches, apathy, depression, anxiety, mood swings and memory lapses. Intestinal yeast infections also impair the absorption of nutrients, which is a separate but equally serious problem. Disrupting the normal ecology of the gut also invites infection by parasites, which further disrupt gut tissue.

In Michael's case, I suspected problems with internally generated digestive toxins, but to know for certain one must measure. I suggested to Michael that he ask his physician to be tested for candida. (Convincing the physician to do the candida test was not easy. Physicians do not generally look for such infections, and his mother had to put considerable pressure on the doctor.) The test did show that Michael had a candida infection, which he was able to get rid of through natural methods such as taking high-quality probiotics and grapefruit seed extract and by reducing dietary sugar (which was "feeding" the yeast problem). Michael, who had been completely disabled by his disease throughout the summer, was able to go back to Harvard in the fall, complete his senior year and graduate.

Problems such as Michael's are common in America because of the excessive antibiotics that our physicians prescribe. While the use of antibiotics is prudent and necessary in very select cases, for the most part antibiotics unnecessarily damage the digestive system and contribute to intestinal toxemia. This toxemia often subjects us to far more toxicity than the original "germ" that the antibiotic was supposed to kill.

Unfortunately, almost everybody in America has taken antibiotics at some point; these drugs are a major cause of health problems, including fatigue and allergies.

Intestinal toxemia can be provoked in other ways, by medical drugs such as non-steroidal anti-inflammatory drugs (NSAIDs, including aspirin, ibuprofen, naproxen, ketoprofen, etc.) and oral steroids (cortisone pills, birth control pills, etc.).

Maldigestion of food (exacerbated by medical drugs or not) produces toxins inside your body. A mostly cooked and processed food diet lacking critical enzymes is a common contributor, as is poor chewing of food. Low-fiber diets are also problematic. Whatever the cause, undigested food can rot and poison you while still inside you. Carbohydrates ferment, fats turn rancid and proteins putrefy. The most common symptoms are bloating, constipation, gas, halitosis, heartburn, eye problems, neurological problems and headaches.

Keep protein consumption moderate; diets high in protein, especially cooked meat and pasteurized dairy, overload our digestive systems. We need only 35 to 40 grams of protein per day (more for athletes or those with large body frames), but Americans eat an average of 90 grams of gut-putrefying protein per day. A one-pound slab of roast beef contains more than 100 grams of protein. Large quantities of cooked and denatured proteins, which are harder to digest, can cause an

overgrowth of a type of putrefactive bacteria that thrive when food is rotting in the gut. These bacteria produce toxic chemicals such as indole, skatole, phenol and hydrogen sulfide. In addition, these putrefactive bacteria displace friendly bacteria, which are essential to good digestion and health, and the result is intestinal toxemia. To prevent or eliminate the problems associated with intestinal toxemia:

- Avoid the use of antibiotics, anti-inflammatories and steroids (including birth control pills).
 - Avoid excessive amounts of protein.
 - Minimize or eliminate processed foods. Eat the right kinds of fats.
 - Avoid sugar, white flour, coffee, excessive alcohol and fried foods. These substances are hard on the digestive system.
 - Adhere to proper food combining and chewing; the digestion process must begin in the mouth and in the stomach for the intestines to function properly.
- Do you suffer from indigestion, bloating, gas, cramping, loose stools, constipation or gastrointestinal reflux? Any of these can indicate intestinal toxemia and should be addressed before they lead to serious disease.

You can also consider other strategies if you are suffering from symptoms of poor digestion: fasting, exercising, drinking large amounts of water, and taking high-quality supplements, including probiotics, digestive enzymes, and vitamins and minerals. All of these help to detoxify, repair and rebuild healthy tissue—in particular by helping to create an environment in the digestive system conducive to the growth and maintenance of friendly bacteria.

Allergies Should Signal Alarm

Allergies are a common source of internally generated toxins. Every allergic reaction produces metabolic debris that has a toxic effect. We tend to think of allergies as “normal,” a benign inconvenience, because so many people have them. Not so. Healthy people do not have allergies. Allergies are an abnormal immune response to foods and substances in your environment. Most food allergies are the result of an abnormally functioning digestive system, as already mentioned, whereby undigested food molecules are allowed to enter the bloodstream through damaged gut tissue. The immune system recognizes these food particles as foreign, and you have an immune response called an allergy. The body remembers this response; every time you eat the offending food, an allergic reaction—and the toxins created by that reaction— is produced.

When an offending substance, called an allergen, reacts with an antibody produced by the immune system, large amounts of allergen/antibody (immune) complexes can be formed. If immune complexes are formed in greater quantities than the body can handle, they can be deposited in tissues (such as brain arteries, brain membranes, small blood vessels, the liver, the uterus, the lungs and the kidneys), where they are capable of clogging blood vessels and joints and are known to release chemicals that cause a cascade of health-damaging reactions. Through this mechanism, immune complexes may be responsible for up to 90 percent of all kidney disease.

Allergies are an indication of systemic illness and should be considered a serious immune dysfunction disease.

If you are allergic (and most Americans have allergies and intolerances, although they may be unaware of it), determine the substances you react to and avoid them. More importantly, strengthen your immune system, through diet and supplements, so these reactions will not occur in the first place; optimize your body’s ability to detoxify so that you can minimize damage caused by the allergic reactions you do suffer.

Stress Poisons in Many Ways

Stress can be loosely defined as any demand we place upon the body; the body's reaction to these demands causes us to "feel stressed." Everybody knows that stress is hard on us, but few people understand why, on a physical level. Chronic stress literally poisons you.

The body's response to stress—often called the "fight-or-flight response"—refers to feelings of anger or fear that generate the release of chemicals in your body, designed to give you more strength in an emergency.

In an emergency situation that passes quickly—for example, you rush to catch someone who is falling—the body is able to detoxify the stress chemicals that are produced. However, when stress is chronic, and we constantly live our lives in stressful ways, these chemicals build up and inflict damage to our cells. Common stress symptoms include muscle wasting, fatigue, osteoporosis, high blood pressure, fragile blood vessels, suppressed immunity, impaired mental function and a host of other problems. What stress is, how it affects you (physically and psychologically) and what you can do about it will be explored more in chapter 7, which explores the psychological pathway.

As we have discussed, the cells in your body naturally produce toxic byproducts that a healthy body is designed to handle. If the body becomes overloaded with toxins, for whatever reason, even normal metabolic toxins can add to the total toxic load and damage cells. Chronic, internally generated stress chemicals can often move us into toxic overload.

Illnesses also stress us with massive amounts of internally generated toxins, which is why we must choose health in the first place. When symptoms of illness do manifest, cells are malfunctioning and the body is struggling desperately to make itself well again. Under these extra stress loads, to minimize the damage done, taking steps to optimize cellular function becomes even more important.

Your Primary Toxic Defense: The Liver

Various organs in the body—kidneys, bowels, lungs, lymph system and the skin—are designed to eliminate metabolic waste. Fiber helps "carry out the garbage" in the digestive system, and exercise helps us detoxify via sweating and movement of the lymphatic system. Water promotes detoxification through the kidneys and sweat glands, and saunas assist in removal of both water and oil-soluble toxins.

At any given time, about 25 percent of all the blood in your body is in your liver, awaiting detoxification. This process begins with a sophisticated filtering system that captures and digests foreign debris. Next, enzymes, produced by the liver, deactivate and eliminate toxins. If these enzymes are interfered with—either deactivated by environmental toxins such as lead and mercury or never manufactured in the first place because of nutrient deficiency—toxic overload is certain to result. Liver enzyme detoxification has two phases: In phase one, the liver produces enzymes that take harmful toxins such as alcohol, pesticides, herbicides and prescription drugs, and oxidizes them (burns them) in preparation for removal from the body. This process creates potentially harmful free radicals that must be neutralized with dietary antioxidant nutrients. In phase two, more enzymes are used to combine the oxidized chemicals from phase one with other molecules, which then can be excreted harmlessly in the bile or urine. In both phases, the food we eat supplies the raw materials needed to produce all of these enzymes and other chemicals that are required. These elegant detoxification systems depend on a constant supply of nutrients, which we must obtain from our diet, but we frequently do not.

Help your liver's phase-one detoxification process with antioxidant nutrients: vitamins C, E and A, along with coenzyme Q10, carotenoids, bioflavonoids, selenium, manganese, copper and zinc. Some of these nutrients neutralize free

A Buildup of External Toxins

Chronic exposure to small amounts of seemingly harmless toxins presents a problem more dangerous than people realize. Even in trace amounts, toxins can build up and overload our cells, causing malfunction. The average American is building up (bioaccumulating) between three and five hundred manmade chemicals, most of which did not exist prior to World War II and have never before been in human tissue. Therefore, the combined toxic effects of these chemicals are impossible to calculate.

Physicians rarely consider toxic buildup as a primary cause of disease and rarely test for toxic underlying problems. In fact, about the only time the medical community will cite toxicity as a primary cause of disease is when somebody dies or becomes obviously ill from massive toxic exposure, such as a chemical spill. Subtle and gradual toxic exposures typically go undetected, which explains how people suffering from toxic overload can go to their doctors repeatedly (with persistent, if vague, complaints of "not feeling quite right") and never receive a correct diagnosis. When people finally do become sick from their bioaccumulated toxins, following the path of their illness back to the myriad toxic sources is nearly impossible. If these toxins weren't so insidious and if they made us sick or killed us quicker and more straightforwardly, we would understand more readily the need to avoid them. Instead, we expose ourselves unknowingly and we lay the groundwork for massive cellular malfunction, little by little. Combine these external toxins with those generated inside the body, and the eventual result is toxic overload.

A chilling example: Environmental and dietary toxins bioaccumulate in a mother's fatty tissues throughout her life. When she starts nursing, her toxin-loaded constantly breathe toxic air. By the end of each day, these toxic contaminants often reach a substantial cumulative total. EPA scientists found that the total toxic residues in our daily diet can exceed 500 percent of the recommended daily maximum, even if each individual food is within "safe" limits!

A Poison Gas Chamber of Her Very Own

Several years ago, a young married couple from Chicago asked me to help their three-year-old daughter, Anne, who was experiencing seizures. Anne had been examined by at least a dozen specialists, but their only recommendations were anti-seizure medications that made Anne sick, yet failed to stop the seizures. The desperate parents called me, a complete stranger two thousand miles away. They begged me for help, even though I am not a physician.

Because there is only one disease, I knew that Anne's problem was malfunctioning cells. But why were they malfunctioning? Although I asked many questions about Anne's history, nothing seemed unusual about her birth, background or development. She had been breast-fed (a good thing; even though breast milk is toxic, it is still preferable to the alternatives), and her diet was actually better than average. In fact, she had been remarkably healthy ever since birth—until the seizures started.

I began to ask questions about her environment. As it turned out, during most of her young life, Anne had been sleeping in a crib in her parents' bedroom. When she

outgrew the crib, her parents decided she should have her own bedroom, and they refurbished a room. Knowing that brand-new room furnishings can be quite toxic, I focused on environmental toxins as the probable cause of the little girl's problems. I learned that before the onset of the seizures, Anne's new bedroom had been given a fresh coat of paint and was furnished with new wall-to-wall carpeting, a new television set and new furniture, including a new bed and mattress. In fact, that new bedroom had just about every amenity that any set of loving parents could give to their beloved daughter, but it was also a poison gas chamber! The new paint, carpet, mattress, television and furniture (constructed of particleboard, which contains formaldehyde) were all giving off toxic gases. You recognize the typical "new paint smell," that "new carpet smell" and that "new furniture smell." They are all toxic, especially when they are brand-new, at which time they emit higher concentrations of chemicals. Shut anybody inside a bedroom like little Anne's for eight or ten hours a night, and the person is exposed to a lot of toxins.

Anne was in toxic overload, and her seizures were the result. Often, in a case like this, when you remove the source of the toxins, you cure the disease. Instead, Anne's physicians had prescribed antiseizure medications, which added to her toxic overload, making her sicker. I suggested an experiment to Anne's parents: Close off the toxic bedroom and allow Anne to sleep in another room for a few weeks. The result: The seizures stopped, and Anne returned to being a normal and healthy child.

Fight Back with Foods

Why isn't our society taking more action to protect us from toxins? Why don't our physicians routinely warn us about toxins and check for them? One explanation lies in a 1988 report issued by the National Academy of Sciences titled, Role of the

Primary Care Physician in Occupational Environmental Medicine, which concluded

that while toxic environmental chemicals play an increasingly important role in modern chronic diseases, almost all physicians are ignorant about the degree to which low-level toxins affect health.

One of the most direct sources of our toxic exposures is the foods we eat. A meal that looks, smells and tastes good is a wonderful thing, but you owe your body more. You need to make sure your food is free of toxins and filled with nutrients that support your body's natural ability to detoxify.

You need to find out what is in your

food, where your food came from and how your food has been altered from the way nature provided.

One of the best ways to minimize the toxins is to buy organic foods. Organic is a method of growing and producing food free from chemical fertilizers and pesticides, artificial ripening agents, preservatives, genetic modification and radiation. The term "organic" applies to more than fruits, vegetables and grains; organically grown animals are fed organic feed and are produced without the customary use of antibiotics, hormones or other supplemental medications. Organic foods may be more expensive and somewhat more difficult to obtain, but they almost always contain fewer toxins and better nutrition. Read labels; the U.S. Department of Agriculture has approved organic certification and the label should bear the logo. Unless a product clearly says that it is organic, it almost certainly is not. If you live in an urban area, organic foods purchased at local farmers' markets are most likely the freshest, most nutritious, least toxic foods you can obtain. Despite that, almost 90 percent of the food dollars spent in America today are spent on toxic, processed foods that are not organic. To make matters worse, we eat almost no fresh food,

limiting the nutrients available to help us detoxify all the bad stuff we constantly take in.

Feeding into Behavior Problems

Several years ago, a grandmother came up to me at a break in one of my workshops and asked what to do about her psychotic four-year-old grandson, Gerald. She described the boy's fits of uncontrollable anger and said that he would strike out at everyone and everything in his path. Gerald had been taken to a number of make healthy choices.

My day with Cynthia and her husband, Tom, serves as a general guide for you to start on a path toward a life-sustaining, nontoxic diet. The first thing I did with the couple was to clean out all toxic foods from their refrigerator and pantry. We ended up with several boxes filled with foods to be discarded; a lot of it was toxin-loaded breakfast cereal that her children would have eaten.

Then we headed to the local health food store. We went down each aisle and examined foods, read labels and discussed how to select foods that are either nontoxic or at least less toxic than supermarket alternatives. For example, a healthy substitute for the boxed cereals was found in the grain section of the health food store. We purchased a variety of organic, whole grains that could be cooked like rice and fed to the children. (By the way, the kids loved it.)

As Cynthia, Tom and I walked through the store, I began to explain principles that would help them in the future. Almost any type of food that has been packaged—in a box, jar, can or bottle—has been processed and is likely to contain toxic chemicals. These toxic chemicals either can be deliberately added to the foods (food additives), or they can result from food production practices (chemical residues). Whatever the source of these chemicals, processed foods (such as breakfast cereal, bread, canned foods, frozen foods, oils and vegetable shortenings, soft drinks, ice cream, cookies, cake and candy) are loaded with them. In addition to their lack of nutrition, the high toxic content in processed foods makes them a poor choice.

A variety of food additives are used to enhance flavor, color and texture; to help foods process better; and to extend their shelf life. In all, more than three thousand FDA-approved additives are in use today, and the average American ingests more than ten pounds of them per year. Imagining someone eating ten pounds of toxic, synthetic chemicals a year is difficult, but we do it—a little at a time, without realizing how it adds up. Although food additives must be approved for safety, frequently they are initially determined to be safe, only to be removed later from the market due to unanticipated harmful effects. Do not assume that food additives are safe just because the FDA has approved them.

Furthermore, researchers usually test one additive at a time, even though we eat them in combination. Almost no research goes into studying the safety of food additive combinations. Our modern exposure to many different combinations of food additives is a gigantic and dangerous chemistry experiment. The combined toxic effects of food additives were reported in a study conducted by B. H. Ershoff (published in a 1976

Journal of Food Science

) that examined three different FDA-

approved food additives: an artificial color, an artificial sweetener and an emulsifier (a substance that keeps oil and water from separating). When fed one at a time, these food additives caused no readily observable side effects in experimental animals.

But, when two of the additives were consumed at the same time, the animals became sick. When all three were combined, the test animals died in less than two weeks!

Bearing this in mind, pick up an average box of breakfast cereal (or just about any

other highly processed food) and count how many additives are in the product. Obviously, you are eating these additives in combination. After examining the labels on boxes of breakfast cereal in Cynthia and Tom's pantry, we discarded all of them because the labels showed that they contained artificial colors, flavors, preservatives and hydrogenated oils.

Read the labels on the foods that you buy. When a food contains artificial colors, flavors, preservatives or other additives, do not buy it. What would happen if we eliminated certain food additives from our diet? A study reported in a 1986 issue of the

International Journal of Biosocial Research

addressed this question. Between 1979 and 1983, the New York City public school system gradually removed foods containing artificial colors and flavors from the school lunches served to more than one million children. During this same period, without any other changes being introduced, the schoolchildren's academic performance skyrocketed. New York City schools experienced the largest four-year gain in academic performance ever measured in any city school district in U.S.

history. How was such improvement possible? Food additives are toxic; they poison cells. When you stop poisoning cells, health improves. As the health of brain cells improves, so does the ability to think, learn and remember. A contributing factor to today's poor academic performance is the burden of toxic exposure on the developing minds of our young people. Unfortunately, once the experiment was over, because of political pressure from conventional food suppliers, the New York City schools reverted to "normal" foods, and these extraordinary gains were lost.

Another risk in processed foods you do not find on the label: toxic chemical residues. The manufacturer does not deliberately add these chemicals, but they are present in almost all ordinary commercial foods. If manufacturers do not add it, they do not have to list it. (Recall David's exposure to mercury in tuna fish; obviously, mercury is not listed on the label but it is in there, because it was in the fish.)

Chemical residues come from many different sources, including industrial chemical and pesticide residues, herbicides, fungicides, artificial ripening agents, hormones and other veterinary drugs and packaging materials.

On our "tour" of hidden toxic residues, Cynthia, Tom and I took a walk down the frozen foods aisle. According to the 1982-1986

FDA Total Diet Study, frozen french

fries contained 70 different pesticide residues. Frozen pizzas had 67 industrial and pesticide residues. Frozen chocolate cake contained 61 toxic residues and milk chocolate had 93. Peanut butter had a whopping 183, including highly carcinogenic aflatoxin, which is produced by a mold that grows on peanuts.

Lurking in all the aisles was another overlooked danger: packaging materials. The toxins in packaging materials (such as plastic wrap, plastic bottles, milk containers, juice boxes, Styrofoam and epoxy can linings) can leach toxins into our foods before we eat them. Foods coming into contact with packaging materials that contain water or oil-soluble toxic chemicals can absorb these chemicals, and then the consumer ingests them. Portions of the polymers, plasticizers, stabilizers, fillers and even colorants in plastic wrap can dissolve into the food. Avoid foods packaged in plastic. Choose foods packaged in more appropriate materials, such as paper and glass. It's ironic that people sometimes spend extra money to buy organic foods, yet the foods may be wrapped in toxic packaging. Why purchase organic meat in a Styrofoam tray topped with plastic shrink-wrap, or organic canned goods in an epoxy-lined can?

Unfortunately, these conveniences come at a price, and that price is the bioaccumulation of toxic chemicals in your body and subsequent disease.

Choosing Your Oils: A Slippery Slope

We continued our shopping trip, learning how to avoid foods that invite sickness. In the oils and salad dressings section, I reminded Cynthia and Tom that almost all oils on supermarket shelves are processed and toxic. These toxic oils also find their way into a variety of prepared and processed foods, including salad dressings, canned and baked goods.

Most oils, especially peanut, cottonseed and soybean, are highly contaminated with pesticide residues toxic to the nervous system. Many modern oils use chemical extraction methods, which leave solvent residues that are lung irritants, nerve depressants and detrimental to health in general. Even oils that have been cold-pressed (rather than chemically extracted) often are refined with toxic chemicals and exposed to high temperatures in their bleaching and deodorizing processes, making the oils toxic. Exposed to high temperatures, nutrients in these oils are altered and turned into toxic, trans-fatty acids and a variety of other toxins (aldehydes, ketones and hydroperoxides). About one-third of all the oil sold—whether bottled or contained in margarine, vegetable shortenings, baked goods, breakfast cereals, peanut butter, etc.—has been hydrogenated or partially hydrogenated and contains toxic trans-fatty acids and numerous other toxic chemicals.

Since these processed oils have come into widespread use, the incidence of myocardial infarction (a type of heart attack) has increased eightyfold, and heart disease, formerly rare, has become a leading cause of death. Coincidence?

According to Udo Erasmus, author of *Fats That Heal, Fats That Kill*, the reason for

these burgeoning health problems is that processed oils promote a condition known as “fatty degeneration.” In this book, Erasmus wrote: “Sixty-eight percent of people die from just three conditions that involve fatty degeneration: cardiovascular disease, cancer and diabetes.” Only a handful of healthful fats and oils are on the market: organic butter or ghee, high-quality olive oil (difficult to find), and high-quality essential fatty acid products such as flaxseed oil (see appendix C for my personal choices).

Dangers in Dairy and Meat

Our little group arrived at the dairy section. As you recall, milk and dairy products are not appropriate for human consumption and should be avoided by everyone, especially infants and young children. Toxic bioaccumulation is a problem; virtually all of the toxins to which a cow is exposed during its life bioaccumulate in its tissues, and these toxins are then present in its milk. You should regard milk as a toxic soup filled with pesticides, antibiotics, dioxins, hormones, sulfa drugs, tranquilizers and other contaminants. Worse, the practice of pasteurization (a heat treatment done to virtually all milk products to kill bacteria) alters the physical and chemical properties of the milk. Pasteurization not only renders the nutrients less useful to your body but creates toxins as well. Between the toxic bioaccumulation, the pasteurization and the fact that milk products make up 25 to 50 percent of many Americans’ diets, milk is a major contributing factor to our high rates of infectious, allergic and chronic disease. In fact, milk consumption has been linked to many diseases, including osteoporosis, multiple sclerosis, diabetes, heart disease and cancer. My recommendation to Cynthia and Tom was that they eliminate milk and milk products from their family diet; I recommend the same to you. Milk does not do your body good.

Animal products were our next stop. Meat and eggs can have serious toxicity problems. Though animal products contain essential nutrients (and I do not recommend a diet devoid of them), you must choose your sources carefully. The nutritional value of a food source should always be weighed against the toxins it contains or is likely to contain.

Commercial livestock contain many toxins, which become concentrated in their tissues. Foods from commercial cattle (and their milk), chickens (and their eggs) and most farmed fish are all poor food choices. All their lives, these animals are fed foods that are lacking in nutrition and toxic (contaminated with pesticides and other agricultural chemicals). Pound for pound, livestock feed is substantially more toxic than the foods we eat, not to mention that large animals like cattle eat a lot more food than we do. When you eat these highly toxic animals, or products derived from them, the toxins enter you. In 1976, the EPA studied human breast milk and found that the toxic contaminants in the milk of vegetarian mothers was only 1 to 2 percent of the national average. The solution is to minimize toxic exposure by selecting organically produced meat, poultry, eggs and wild fish from relatively nonpolluted deep-water ocean areas rather than those harvested from polluted coastal areas or farmed.

Selecting organically produced animal products almost certainly requires a trip to a well-stocked, reputable health food store. The foods are more expensive, but the extra money buys protection from toxins, as well as contributes to better nutrition and a more environmentally responsible method of farming.

Pesticides

Pesticides are among the most dangerous of all man-made chemicals. When we are exposed to pesticides, not only do they harm us and our children; they harm all life on the planet. Yet, there are times when it sure would be nice to have something that effectively kills and repels bugs without doing harm to you, your children, your pets, or the environment. I found such a product; it is called Orange Guard.

pH paper

pH balance is a critical part of cellular health. For monitoring the pH of urine and saliva, pH paper in the range of 5.5 to 8.0 is ideal. pH paper in this range is available at Beyond Health, along with guidelines on how to measure and control your pH.

Rebounding

Health is determined by many factors, including diet, toxins, genes, stress, thoughts and emotions and the amount of physical activity we get.

Research has proven that the benefits of exercise are cumulative and that physical activity is essential for health. Rebounding is a simple, easy, and inexpensive way to address this problem without leaving your home.

If you consider buying a rebounder, do not purchase a cheap \$50 mini-trampoline at your local sporting goods store. This type of rebounder actually can do more harm than good. Inexpensive rebounders tend to have bad springs; these cheap tube springs do not absorb and cushion your weight properly, causing a bounce that is abrupt and jarring. People have suffered permanent nerve damage from using such units. Select a rebounder with fat, barrel spring that allows for smooth deceleration, bringing you to a gentle stop. Another problem with cheap rebounders is poor-quality matting material. Cheap mats stretch too much, do not support your feet properly and thus place undue stress on your ankles, knees and back. By contrast, good rebounders have high-quality mats that hold their shape and do not overstretch.

Other considerations for a rebounder include the strength of the frame, the height and number of legs, the quality of the sewing that attaches the webbing to the mat

and the ease with which the unit can be folded, stored out of the way or made portable. The rebounder I selected for my personal use is available through Beyond Health.

Shampoo

All shampoos will remove oil and dirt from your hair, but the challenge is finding one without toxins. Common toxins include sodium lauryl sulfate and artificial colors, fragrances and preservatives. Depending on the formula, other ingredients in shampoo are capable of reacting with sodium lauryl sulfate to form nitrosamines, which are powerful carcinogens. The brand I chose for my personal use is Aubrey Organics. Aubrey makes a variety of shampoo products, so there is bound to be one that is just right for you.

Skin Cream

Like shampoos, most skin creams contain a long list of highly toxic chemicals including artificial colors, fragrances, and preservatives such as parabens (capable of damaging sub-layers of skin even more severely than a bad sunburn— damage that goes essentially unnoticed—until a cancer diagnosis). My search for a skin cream that contained no toxins and only high-quality natural ingredients led me again to Aubrey Organics, which makes a variety of safe and effective skin creams. My favorite is their Green Tea & Ginkgo Moisturizer, which is available at quality health and specialty stores or at Beyond Health.

Soap

Soaps generally come in either bar or liquid form and are made from either vegetable or animal fats or synthetic detergents. There are enormous differences in the amount of skin irritation caused by different brands of soap. Generally, soaps made from glycerin are among the mildest. Soaps can also contain a variety of toxins including artificial colors and fragrances as well as antibacterial chemicals. I look for soaps that minimize both skin irritation and toxicity while still doing the job. My favorites are soaps made by Weleda and Aubrey Organics. I also like Kirk's Castile bar soap and Dr. Bronner's liquid soaps; both are effective, safe and relatively inexpensive.

Sunscreen

This is a perspective issue more than a recommendation. Sunlight is a health promoting, required nutrient. Sunburn, however, damages health. The answer is to get sun in frequent moderate doses and build a tan. Unless you do something foolish, the sun will not cause disease in healthy people who have adequate amounts of nutrients like carotenes, lycopene, essential fatty acids, and vitamins A, C, E, and zinc and selenium. Our need for the sun is exemplified by the fact that nature intended us to get most of our vitamin D from the sun. Vitamin D is almost totally absent in vegetable foods. If you must have a sunscreen skin product, I recommend

looking for those that do not contain any toxic, synthetic chemicals. My personal choices are any of the several sunscreen products by Aubrey Organics, or merely sticking to the ancient Mediterranean custom of rubbing high quality olive oil (such as Bariani) on the skin.

Synthetic chemical sunscreens may indeed help prevent a sunburn, but they do not prevent skin cancer—in fact, they may even promote it.

Researchers at the M.D.

Anderson Cancer Center in Houston cite: “There is no substantial evidence that

sunscreen protects against any of the three forms of skin cancer.” Robin Marks,

M.B., M.P.H., a dermatologist and a professor at the University of Melbourne said:

“Relying on synthetic chemicals to prevent cancer is laughable.” Arthur Rhodes, a

University of Pittsburgh dermatologist, told a 1994 meeting of the American Cancer

Society that sunscreens “appear weakly effective or ineffective.”

Toothpaste

Because almost all toothpaste is toxic, I looked for a toothpaste that would clean

teeth without adding to toxic overload. The mucus membranes in the mouth are

highly permeable and chemicals in toothpaste pass right through the membranes into

the blood stream where they can bioaccumulate in the body to toxic levels. Toxins

such as sodium lauryl sulfate, fluoride, artificial sweeteners, artificial colors, and

artificial flavors are common contaminants in toothpaste. The brand I selected after

eighteen months of research is Weleda. While there may be other acceptable brands, I did not find any in my search that were superior to Weleda. If you decide to look for one on your own, the objective is to find a brand that is made from only natural and exceptionally pure raw materials. For additional information about these products, go to www.beyondhealth.com or call 800-250-3063.

A PENDIX D A LTERNATIVE C ANCER T REATMENTS C

ancer may be the most feared of all diseases, but like all so-called diseases, it is nothing more than malfunctioning cells. Restore those cells to normal function and the cancer will disappear. Modern medicine's dangerous treatments have failed to put a dent in our cancer epidemic. Meanwhile, alternative methods have been clinically proven to reverse cancer. Good resources include the Definitive Guide to Cancer by Diamond, Cowden, and

Goldberg, published by Future Medicine Publishing. Another resource is Beating Cancer with Nutrition by Patrick Quillin. For specific suggestions regarding alternative treatment options, consult with People Against Cancer. By becoming a paid member, they will provide information about treatment options through an International Physicians Network that reviews your medical records and provides specific recommendations. In addition, People Against Cancer provides a wide range of educational materials of interest to people with cancer. For more information go to www.beyondhealth.com and click on the links page or call 800-250-3063.

A PPENDIX E: I MPROVING V ISION E

yesight can be improved using natural vision improvement exercises. By regularly performing a series of simple exercises, most people can throw their eyeglasses away. Meir Schneider's Yoga for Your Eyes offers a complete program

including a 62-page booklet, eye exercise chart, and an 82-minute videotape teaching you how to improve your vision naturally. Meir Schneider was born without sight. He developed his own total approach to self-healing and used it to reverse his own blindness.

Yoga for Your Eyes is available through Beyond Health at www.beyondhealth.com or 800-250-3063.

A PPENDIX F: H EALTH-E- A MERICA F OUNDATION D

ramatic increases in disease-care costs and rates of disease are threatening to overwhelm the economic and social structures of the United States.

An aging population and an unprecedented epidemic of chronic and degenerative disease are making costs spin out of control. With the percentage of young taxpayers shrinking, providing health benefits to the elderly will overwhelm the national budget within

thirty years. The United States spends more on health care than any other nation. Yet the incidence of almost every chronic disease continues to increase, the health of our people continues to deteriorate, and costs are soaring to unsustainable levels.

According to the Medicare Board of Trustees, Medicare spending will double over the next ten years. Medicare costs will exceed those of Social Security, and by 2030, 75 percent of the federal budget will be allocated to Medicare, Medicaid, and social security. The promised benefits under Medicare and social security are projected to exceed scheduled income by \$465 trillion over the next 75 years. The combined economic and social disruption from supporting such a large, diseased population could be catastrophic.

A program to prevent this crisis must become a national priority.

The solution to this crisis is to arrest and reverse the epidemic, thereby lowering health costs to a fraction of today's expenditures. Aging is inevitable, but health is a choice. The variable over which we have control is whether people remain healthy as they age. We must teach them how to do this. Since this epidemic is man-made, we can choose to unmake it through a dramatical and new scientifically based education model.

The mission of Health-e-America Foundation (HeAF) is to arrest and reverse our chronic-disease epidemic through education—by teaching schoolchildren and their

families the basics of good health and empowering them to achieve it. With childhood disease rates increasing, teaching children how to improve health and avoid disease will produce an almost immediate reduction in costs, with the savings compounded each year.

Health-e-America Foundation will provide health education using a new model of health and disease based on the revolutionary concept of maintaining and improving cellular health. In essence, there is only one disease—malfunctioning cells. It is malfunctioning cells that become susceptible to infection and which manifest as cancer or other so-called diseases. Teaching children how to prevent and repair cellular malfunction will begin to immediately arrest and reverse America's chronic disease epidemic. This epidemic took generations to create, but we must reverse it much faster. This can only be accomplished by teaching an entire generation of children.

Existing health education is disjointed and incomplete. It has not been effective in curtailing this epidemic because it fails to provide a coherent understanding of health. Worse, most of the existing educational materials have been supplied by industries promoting unhealthful or outmoded solutions. The one-disease concept is a vastly more effective way to teach health. This concept is easy to understand and it

is a comprehensive system incorporating all aspects of health. Using advanced E-learning technology, HeAF will provide, free of charge and in CD ROM format or online, educational materials that are stimulating to students and available to teachers in grades kindergarten through high school. HeAF will produce these unique educational materials as well as launch a national educational campaign for parents, teachers, and school administrators to facilitate the introduction and use of these materials in the schools. This program will benefit the existing generation, but most important, it will improve the health of each succeeding generation, which we all have a responsibility to ensure—to ensure the future of America.

For more information on HeAF go to www.healtheamerica.org

To support this important work, tax-deductible donations can be sent to:
Health-e-America Foundation

P.O. Box 150578

San Rafael, CA 94915

“Never doubt the power of small groups to change the world; indeed, it is the only thing that ever has.”

Margaret Mead,

Anthropologist 1901-1978

Table of Contents

COVER PAGE

TITLE PAGE	
COPYRIGHT PAGE	
CONTENTS	
FOREWORD	
ACKNOWLEDGMENTS	
INTRODUCTION	
1. I ALMOST DIED	
2. YOUR POTENTIAL FOR HEALTH	
3. THE NEW THEORY OF HEALTH AND DISEASE	
4. CHOOSING HEALTHY CELLS	
5. THE NUTRITION PATHWAY	
6. THE TOXIN PATHWAY	
7. THE PSYCHOLOGICAL PATHWAY	
8. THE PHYSICAL PATHWAY	
9. THE GENETIC PATHWAY	
10. THE MEDICAL PATHWAY	
11. A SHIFT IN PERSPECTIVE	
REFERENCES	
AUTHOR'S NOTE: GOING BEYOND HEALTH	
APPENDIX A: HEALTH INFORMATION	
APPENDIX B: VITAMIN SUPPLEMENTS	
APPENDIX C: FOODS AND PERSONAL PRODUCTS	
APPENDIX D: ALTERNATIVE CANCER TREATMENTS	
APPENDIX E: IMPROVING VISION	
APPENDIX F: HEALTH-E-AMERICA FOUNDATION	

animal products and heart disease, yet sugar is a more serious cause. A study by A.

M. Cohen, M.D., published in a 1961 issue of the medical journal

Lancet,
reports

that Jews from Yemen were noted to have very little heart disease, even though the

diet in Yemen is typically high in animal fat. When these Jews moved to Israel,

where a lot of sugar is common in the diet, rates of heart disease increased dramatically.

Being an antinutrient, sugar also causes calcium to be lost in the urine, forcing the body to remove calcium from the bones in order to keep the blood calcium levels within normal limits. By taking the calcium out of your bones, eating sugar contributes to osteoporosis. People concerned about or already suffering from osteoporosis should eliminate sugar from their diet.

Eating sugar causes deficiencies of a number of minerals, including calcium, chromium, magnesium and zinc. When you do not have enough minerals, your body has difficulty producing sufficient digestive enzymes needed for good digestion.

Undigested food particles can enter into your bloodstream, creating serious problems such as allergies and immune-deficiency diseases.

This is why foods consumed with sugar (such as wheat, corn, milk and eggs) become the most common allergens. If you enjoy your foods and do not want to become allergic to them, learn to avoid combining them with sugar.

In this modern age of AIDS, autoimmune and other immune system diseases, sugar creates special problems. Sugar damages the cells of our immune system, creating susceptibility to colds, flu and other immune-related diseases. Sugar also plays a crucial role in the development of diabetes. The mechanisms for controlling

blood sugar become faulty when high levels of sugar are present in the diet. Sugar also causes a calcium/phosphorous imbalance, which makes the body less capable of breaking proteins down into the amino acids that are required to make essential body chemicals. Even traditional doctors acknowledge that sugar causes tooth decay. Historically, natives who had little exposure to the civilized world and refined sugar had almost no tooth decay. Sugar is bad enough by itself, but also it is a dangerous partner. You should especially avoid combining sugar with protein (such as a sweet dessert after a steak dinner, or orange juice with eggs in the morning). In combination, they react and form damaging compounds called AGEs (advanced glycation end products). AGEs may even form within your foods before you eat them, if sugar and protein are cooked together (such as baked goods containing eggs and sugar, or a ham baked with brown sugar on top). These AGEs are known to promote heart disease, high blood pressure, cataracts and arthritis. Eating refined sugar is destructive to human health because it causes vitamins, minerals and hormones to become imbalanced, which throws the body into biochemical chaos for several hours. The body, desperately scrambling to right itself, depletes itself of vital nutrients. The most important and universal dietary recommendation I can make to everyone is to cut as much sugar (and foods made

with sugar) from their diet as possible. Those children who are consuming up to half their calories as sugar become sitting ducks for infections and future problems such as diabetes, osteoporosis, cancer, arthritis and heart disease. Eating sugar is death by installment.

White Flour: Quick, Inexpensive and Destructive

Almost all bread, pasta and baked goods are made of white flour—an easy-to-use, easy-to-store, highly processed derivative of what was once a wheat grain. Wheat is a good and nutritious food, but by the time wheat gets ground up and processed into white flour, it bears little resemblance (physically or nutritionally) to wheat. White flour contains little nutrition, is toxic and is an antinutrient (like sugar). Yet the average American consumes more than two hundred pounds of white flour every year.

Almost all of the nutrients once contained in wheat are lost in the process of creating white flour (including 60 percent of the calcium, 77 percent of the magnesium, 78 percent of the zinc, 89 percent of the cobalt, 98 percent of the vitamin E, 80 percent of vitamins B

1

and B

3

, and 75 percent of the folic acid). Also

lost are the essential fatty acids and fiber. Worse still, many nutrients are needed in

order for your body to metabolize the flour for energy. Because the flour does not contain those nutrients, your body is robbed of the nutrients, similar to what happens when you eat sugar.

In 1941, severe nutritional problems prompted our government to pass legislation requiring that certain nutrients be added back to the flour. “Enriched flour” was born. White flour has lost more than twenty-five known nutrients, a handful are added back, yet we still call flour “enriched” (instead of, perhaps, “impoverished”).

We did not have nutritional deficiency in mind when we started making white flour. We made it because it does not spoil; it keeps practically forever, which makes white flour an ideal food to feed people in big cities. However, the malnutrition problem with flour is serious—our bellies are filled in the form of “hearty” pastas and breads, but all those empty calories do not even come close to fulfilling our needs for nutrients, thus contributing to deficiency.

Worse, flour also contributes to the other cause of disease, toxicity. White flour contains almost no fiber, which is essential for proper bowel movements and toxin removal. Eating too much flour (and not enough fiber) is associated with constipation, hemorrhoids, colitis and rectal cancer.

Avoiding white flour is not easy because it is in virtually all breads, pastas, cakes, cookies, crackers, breakfast cereals, pizzas and pastries. But when you realize that

flour causes disease, cutting down on the refined flour products you consume is worth the effort. A plate of pasta with vegetables can no longer be considered a good meal. The vegetables are good, but the pasta is not; choose whole grains or beans instead.

The real health threat from white flour comes not from any single meal, but because we eat so much of it—one or more meals a day, every day. We also need to keep in mind that many other grains frequently are refined (such as those in “multi-grain” breads and cereals) and are reduced to little more than empty calories. Any grain that is finely ground and “stripped” of fiber and other nutrients is a poor nutritional choice because essential nutrients have been lost, which most people do not realize. I cannot tell you how many times I have talked to people who proudly describe their “healthy, whole-grain diets”—diets made of whole-wheat bread, rolled oats, granola, multigrain cereals. All of these are processed, make-believe foods.

Eating processed foods of any kind is fundamentally different from and nutritionally inferior to eating whole, unprocessed foods. On the subject of food processing, one type of grain processing is of special concern: puffed grains. The high heat and pressure used in the puffing process alters the molecular structure of proteins in the grains, making them toxic enough to kill

laboratory animals. Absolutely avoid puffed wheat, puffed millet and puffed rice (including rice cakes), and any other puffed grains. This warning does not include popcorn, which is not subjected to such high temperatures and pressures. In his book, *Fighting the Food Giants*, Paul Stitt reported an experiment in which rats were fed either whole wheat or puffed wheat. The rats eating the whole wheat lived over a year while the rats eating puffed wheat died within two weeks. To avoid health problems created by processed grains, choose whole grains such as millet, oats, quinoa, spelt, barley, amaranth, teff, kamut and brown rice. Many people do not realize that white rice is also a processed grain and, therefore, a poor food choice. Buckwheat, not strictly a grain, can be cooked like whole grains. Organic whole grains are readily available at health food stores. Cook grains in a pot of water as you would cook rice. A rice-cooker will also work. In the real world, often we are forced to make less than ideal choices. At the very least, choose minimally processed whole grains (such as whole-wheat flour or oatmeal) instead of highly refined and stripped grains, such as white flour, white rice and pasta made from white flour.

Misleading Choices

When I told Elizabeth, the woman I introduced you to at the start of this chapter, that if she wanted to get well and stay well she would have to eliminate sugar from

her diet, she replied, “I don’t eat any sugar,” going on to explain that she rarely added sugar to anything. What she meant was, she rarely took white sugar out of the sugar bowl and added it to her foods and beverages. She was not considering the massive amounts of sugar already present in her diet from foods as mundane as ketchup, breakfast cereal, dinner rolls, soup, salad dressing, bottled fruit juices and soft drinks, not to mention chocolates, ice cream, cookies, pies, cakes, snack foods and pancake syrup. Elizabeth was quite surprised when I added up all the sugar she was consuming.

Elizabeth and I also talked about white flour. She did not realize that most of the starches she was eating (including pastas, breads and breakfast cereals) were made from white flour and other processed grains. Thinking about what she should perhaps be eating instead, she made another mistake: Elizabeth proudly showed me a package of the “healthy” multigrain bread she had purchased. I shook my head as I read the ingredient list and explained to her that such bread is not healthy. First, bread is a highly processed food, and this bread’s number-one ingredient was unbleached flour, a highly processed flour that is only marginally better than white flour (it has not undergone the final bleaching process). This supposedly “healthy” bread also contained a health-damaging sugar (corn syrup), hydrogenated oils and

toxic preservatives.

Elizabeth had been misled into believing this bread was a healthy food—perhaps because of the false advertising on the package, claiming it to be “healthy,” and the fact that she had purchased it in a health food store. Many people have a difficult time learning how to discern good foods from bad ones. The simplest explanation is to think of the concepts of real foods and make-believe foods.

The more a food is changed from the way nature would normally provide it, the more make-believe it becomes.

Some Truths about Processed Fats and Oils

A widespread misperception in America today is that to be healthy we must eat a low-cholesterol, low-fat or nonfat diet. Rather, you need fats and oils, but they must be the right kinds of fats and oils, not the processed fats and oils so prevalent in our diets today. Despite our society’s obsession with and fears about fats and oils, these

nutrients are an incredibly important part of a healthy diet. Each of the trillions of cells in your body is surrounded by a permeable cell

membrane. Fats and oils are the primary building materials used to create those cell

membranes. Cell membranes are critically important because all the nutrients your

cells need and all the toxic waste products they must eliminate need to pass through

it. If you eat the right kinds of fats and oils, your cell membranes properly regulate the passage of materials; eating the wrong kinds causes your cell membranes to work against you. When your cell membranes are not working correctly, your cells will malfunction, which can manifest into just about any disease you can imagine.

Essential fatty acids

is the term used to describe the “right kind” of fats and oils. They are essential because the body needs them but cannot make them, so we must obtain them from food. These essential fatty acid molecules have a specific shape that is critical to the way they work in forming cell membranes—like bricks that fit perfectly together to build cell walls. (Chemists use the term *cis*-fatty acids to describe the natural, healthy shape of essential fatty acid molecules.)

When oils are heated above 392°F (as most supermarket oils are), the *cis*-fatty acid molecules change shape, turning into a different and toxic category of fats called *trans*-fats. The shape of *trans*-fats does not work properly for building cell membranes. These improperly shaped “bricks” build a cell wall with holes in it. Cell membranes constructed from *trans*-fats become leaky (allowing substances inside cells to leak out, and vice versa) and brittle (like the shell of an egg, rather than the elasticity of a balloon). If cells throughout your body are leaky and brittle, you have a serious problem.

Because of the way oils are processed, trans-fats (and other toxins) are found in virtually all oils sold in supermarkets and health food stores, including canola, corn, safflower, sunflower, cottonseed and soybean oils, along with food products containing hydrogenated oils, like margarine and vegetable shortenings. Consider the vast numbers of products made with these toxic oils, such as salad dressings, breakfast cereals, crackers, chocolates, candy, potato chips and fried foods such as french fries. The solution? Eat essential (good) fats and avoid hydrogenated and other (bad) trans-fats.

More chemistry that is vital to your health: The two most important essential fatty acids are linoleic acid (omega-6 fatty acids) and linolenic acid (omega-3 fatty acids). For good health, these fatty acids must be consumed in sufficient amounts and in the correct balance with each other. It has been estimated, however, that 60 percent of our population gets too much omega-6s and that up to 95 percent gets too little omega-3s; this imbalance causes disease. Avoid processed, supermarket oils and food products containing them, which perpetuate this imbalance, and supplement with oils combining a healthy balance.

Pioneers in medical research are curing a number of chronic problems (such as depression, heart disease and cancer) by giving their patients the right kinds of fats and oils. But most people have no idea that the bad fats and oils damage cell

membranes and therefore cause disease, which explains why society at large is not demanding alternatives.

As with many of our modern foods, we created technologies that are solely designed to produce the highest amount of oils using the smallest amount of raw materials (seeds, beans and grains) in the shortest period of time with maximum shelf life. Time and money are the driving forces, not health and nutrition. Today, oils are extracted using huge, powerful presses that generate a lot of heat, which, in the presence of oxygen, oxidizes oils, making them rancid and toxic. Yet these now-toxic oils can still be labeled as “cold-pressed” because no heat was added during the pressing process; the heat is an unintentional result of the high-pressure extraction process.

This is why cold-pressed is a meaningless term and is not useful for you in determining what to eat and what to avoid.

Harsh solvents are used to extract oils, which remain in the oil as a residue. These solvents also destroy nutrients in the oils.

In addition, processed oils are typically bleached and deodorized—destroying more nutrients and creating toxins.

To put healthful oils in your diet, eat high-quality olive oil and flaxseed oil. Also, beneficial fatty acids can be found in organic, fresh, unprocessed food in its natural state, such as raw seeds, raw nuts and avocados. High-quality eggs, meat and fish are

also good sources of fatty acids. Keep in mind, though, that essential fatty acids are readily damaged by heat. Use the minimum heat necessary to cook these foods.

Supplement your diet with a high-quality essential fatty acid supplement.

To avoid

chronic disease and slow down the aging process, dietary supplementation of

essential fatty acids (from flaxseed oil, for example) is necessary; deriving enough

of the right fats and oils from the foods that are available today is difficult.

Check your kitchen and refrigerator shelves. Discard your processed oils,

particularly hydrogenated and partially hydrogenated oils (margarine, vegetable

shortening, etc.), and products made with those oils, including many baked goods,

crackers, chips, peanut butter and nondairy creamer. Instead, use primarily high-

quality olive oil, organic butter or ghee, and essential fatty acid supplements (see

appendix C for suggestions).

Myths About Milk

The final failure food on my Big Four list is one that is usually touted as

necessary to good health for adults and children: milk products. Milk's reputation as

a highly nutritious food is undeserved; in reality, modern milk is a highly toxic and

allergenic make-believe food. The United States may produce a lot of milk, and the

dairy boards may try to convince us to drink lots of milk, but milk does not do a

body good.

According to pediatrician Russell Bunai, M.D., in a 1994 issue of

Natural Health,

the one single change to the U.S. diet that could provide the greatest health benefits

is the elimination of milk products. In the 1992 edition of his book

Don't Drink Your

Milk,

Dr. Frank Oski, former director of the Department of Pediatrics at Johns

Hopkins University School of Medicine, said, "We should all stop drinking milk. . . .

It was designed for calves, not for humans." This claim is not what your mother told

you (because she herself was misled), and it is not what the dairy industry would

have you believe, but it is true. The idea that milk is a necessary and healthy part of

the human diet is a myth. As I lecture across the country, recommending (among

other things) that people not drink milk, I am always amazed at how many times

people will call me months later to say that they took my advice, stopped consuming

dairy products, and their health problems disappeared.

Most of the world's population (about 70 percent) does not drink milk or consume

other dairy products (including cheese, yogurt, ice cream and sour cream), for good

reasons. Mother's milk is a perfect food—for infants, not for adults. In nature, no

animal drinks milk after weaning, nor does any species drink the milk of another

species. Granted, we humans have managed to domesticate our livestock, but this

accomplishment does not change the fact that each species (and their milk) is unique. Feeding elephant milk to cats, mouse milk to giraffes or cow milk to humans is not a good idea.

Cow milk, especially in the forms found in your supermarket, is not a good food.

Cow milk contains proteins and fats that are difficult for humans to digest, and cow milk does not supply nearly the amount of calcium that its reputation suggests. Also, statistics from the World Health Organization show that the countries consuming the most milk products also have the highest rates of osteoporosis, breast cancer, allergies and diabetes.

Actually milk can deplete nutrients from our bodies—acting as an antinutrient, just like sugar and white flour. Metabolizing some of the fats in milk (particularly when the milk is pasteurized, and virtually all of it is) uses up essential fatty acids, one of our most serious nutritional deficiencies. For all these reasons, foods containing pasteurized milkfats are at the top of the list of “foods to be avoided.”

Additionally, if pasteurized milkfats are not properly metabolized (because of an essential fatty acid deficiency, which most Americans have), then the fat may be deposited in arteries, contributing to cardiovascular diseases. A prime factor contributing to the health problems caused by milk is pasteurization (heating), which both destroys nutrients and creates toxins, thereby

contributing to each of the two causes of disease. Animals fed pasteurized milk exhibit poor skeletal development, weak bones, osteoporosis and tooth decay. Calves fed raw milk remain healthy, but calves fed pasteurized milk typically die within eight weeks! If a calf cannot benefit from pasteurized milk, how can a human?

The Rest of the Story

Upon hearing that they should not drink milk, people invariably ask, "How will I be able to get enough calcium if I don't drink milk?" My response is, "Where does a cow, a horse, or an elephant get its calcium?" They get it from plants, which are rich in all kinds of minerals—including calcium. Dark green vegetables such as broccoli, chard and kale are rich sources of absorbable calcium. Cow milk is also rich in calcium, containing about 1,200 mg of calcium per quart while human milk contains about 300 mg. However, an infant absorbs far more calcium from a quart of human milk than from a quart of cow milk, even though human milk contains less calcium. Cow milk contains a lot of phosphorous, which prevents calcium absorption. Also, cow milk is low in magnesium, which humans need in order to utilize calcium. In short, your body is not able to use the large amount of calcium present in cow milk. You do not use the calcium, so instead it can build up and form kidney stones, bone spurs, gout and atherosclerotic plaque. Milk robs calcium from bones. The protein in cow milk metabolizes to strong

acids, which can be harmful, so instead the body uses the calcium to neutralize those acids—thereby robbing your bones and other tissues in the process. The United States, with only 4 percent of the world's population, consumes more dairy foods than the other 96 percent combined. If milk is really good for our bones, then we should have the strongest bones in the world. Instead, we have one of the highest osteoporosis rates in the world. We are not alone; all other countries with high dairy consumption also have high levels of osteoporosis. A large percentage of the population is allergic to milk and dairy products, regardless of whether they realize it. Allergic reactions tax the immune system and lower resistance to infections and diseases. Milk allergies are the primary cause of ear infections in children. Given that constant allergic responses shorten your life (and constant use of allergy medications will, too), the answer is to avoid things you are allergic to in the first place. For most people, this means avoiding milk products. According to Dr. Oski, "At least 50 percent of all children are allergic to dairy." Milk is harmful to young children for another reason: It may trigger childhood diabetes in genetically susceptible children. More recently, milk has been linked to multiple sclerosis. Milk also causes localized inflammations in an infant's intestines and can result in low-level bleeding and iron-deficiency anemia. Because of the

problems with allergies, anemia and diabetes, in 1992 the American Academy of Pediatrics recommended that cow milk not be given to babies during their first year of life because it damages health. Yet many mothers are not heeding this advice and still feed their children milk, thinking it is healthy. In September 1992, Benjamin Spock, M.D., (the famous “baby doctor”) lent his voice to the growing chorus warning against the dangers of cow’s milk, urging parents to use breast milk exclusively. Breast milk, yes; cow’s milk, no. Infants should be breast-fed for at least one, and preferably for two to three years. After that, no milk should be consumed.

Our hunter-gatherer ancestors nursed their young for an average of three years, as compared to modern Americans, who nurse for an average of only three months.

Introduction of infant feeding formulas has had a negative effect on children’s health. Breast-fed infants are less likely to develop inflammatory bowel disease when they become adults than bottle-fed infants. Adults who were breast-fed as infants develop fewer allergies throughout life (even among people whose parents had a history of allergies).

Coffee: A Boost with a Big Price

In addition to the Big Four failures, one more dietary habit is worth mentioning because of its huge negative impact on health: drinking coffee. Coffee is popular

because our society chronically suffers low energy and fatigue. The stimulating effects of coffee are used “to get through the day,” and they create dependency. The caffeine does not create or sustain long-term energy; it just hypes the system by overstimulating the adrenal glands, which ultimately carries a long-term price. Caffeine increases the amount of sugar in the blood and provides an energy lift, but it also throws body chemistry out of balance. By doing so, coffee damages health in many ways. Coffee is acidic and contributes to overacidity in the American diet, changing the pH of our cells (and requiring calcium to be robbed from tissues to neutralize the acidity). A number of studies have linked caffeine to urinary calcium loss, which contributes to osteoporosis, hip fractures and death. One of those studies, printed in a January 1994 issue of the Journal of the American Medical Association, found that women who drank two cups of coffee per day increased their risk of hip fracture by 69 percent. Coffee has also been linked to cancer. Coffee that is roasted forms a compound called 3,4-benzopyrene, a powerful carcinogen; an average cup of coffee contains 500 micrograms of known carcinogens. In 1981, professor Brian MacMahon of the Harvard School of Public Health concluded that coffee drinking was the cause of 50 percent of all pancreatic cancer, and that drinking three cups a day increased the risk of pancreatic cancer

threefold.

Why we drink so much coffee is easy to understand. We eat the Big Four all the time, which causes our cells to function poorly and produce low energy levels. Then, we have deadlines to meet and schedules to keep, and coffee seems the only means to make it happen. Eat real food and eliminate “make-believe” food, and you may find that your “need” for coffee declines.

Nutrition Is Not in the Eyes of the Beholder

Make-believe food lacks sufficient nutrients because it is highly processed, heavily cooked or commercially farmed. Yet because we grew up eating these foods, we are completely accustomed to them. Within my lifetime, the practice of eating more make-believe foods instead of organic, fresh, unprocessed foods has increased enormously. For most of my life I lived in areas never more than twenty miles from an apple farm where, during harvest season, I could purchase fresh apples. Today, finding fresh apples is

difficult, because most that are for sale have been in long-term storage since harvesting.

Produce such as apples, cucumbers, bell peppers and tomatoes are waxed to prevent loss of moisture during long-term storage; this wax is not good for you and often seals in toxic pesticide and fungicide residues as well.

Modern eggs are another example of make-believe food. A real egg contains a fatty acid called DHA (docosahexanoic acid), a nutrient that is a critical building component for cells in brain and eye tissue. A real egg supplies an average of 200 to 400 milligrams of DHA. Make-believe supermarket eggs contain an average of only 18 milligrams. Without adequate DHA, the body uses whatever substitute is available to build those cells, causing them to malfunction. DHA is sadly lacking in our modern diets, causing an epidemic of brain dysfunction, including depression, mood disorders, attention deficit disorder and a host of other medical problems. Similarly, a real egg contains ten times the vitamin E of a supermarket egg. To make matters worse, make-believe eggs are loaded with pesticides, hormones, antibiotics and a host of other toxins. We have few real eggs because we have few real chickens. Real chickens must be raised outdoors in the fresh air and sunshine, eating their natural diet of bugs, worms, pigweed, dandelions and other living foods. Most of today's chickens are cage reared, confined in factories where they do not obtain the benefits of exercise or sunlight and are fed nutritionally deficient, processed chicken feed. Neither the meat nor the eggs of these unhealthy animals support healthy human life. Commercial chickens are fed an incredibly deficient and toxic diet. They are so

malnourished and unhealthy that they must be fed a lifetime of antibiotics and other drugs to keep them alive. Ninety percent of commercial chickens have cancer at the time of their slaughter. If these chickens' cells are so malnourished and unhealthy, how can you expect your cells to be healthy when you eat their meat and eggs?

Pork is no different. Pigs are fed a diet of recycled waste, filled with toxins, and

more than 80 percent have pneumonia at their time of slaughter. Likewise with beef, cattle fattened in feed lots are so malnourished and sick that they require a variety of drugs just to keep them alive. In

Diet for a New America, John Robbins described their typical diet:

[S]awdust laced with ammonia and feathers, shredded newspaper (complete with all the colors of toxic ink from the Sunday comics and advertising

circulars), "plastic hay," processed sewage, inedible tallow and grease, poultry

litter, cement dust, and cardboard scraps, not to mention the insecticides,

antibiotics and hormones. Artificial flavors and aromas are added to trick the poor animals into eating this stuff.

The animals are not the only ones tricked. The consumer is "tricked" into buying

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The animals are not the only ones tricked. The consumer is "tricked" into buying these make-believe foods and into thinking that they contain the nutrients required to support healthy life. Dr. Joseph Beasley in

The Kellogg Report

wrote that

shortchanging nutrients over a period of time “is bound to involve human illness,

particularly chronic conditions such as today’s high-technology medicine can’t seem

to get a handle on.” Again and again, well-meaning parents go to the store thinking

they are feeding their families fresh, wholesome foods, only to be fooled by the

multitude of offerings of deficient, make-believe food products.

Carl Pfeiffer, Ph.D., M.D., related in

Mental and Elemental Nutrients

an

experiment at the University of California, Irvine. Healthy rats were fed foods that

an average American would purchase in a supermarket: white bread, sugar, eggs,

milk, ground beef, cabbage, potatoes, tomatoes, oranges, apples, bananas and coffee.

The rats developed a variety of diseases. Dr. Pfeiffer

concluded that if the average

human diet could not support the health of rats, then it probably would not do much

better for humans.

In

Diet for a Poisoned Planet,

David Steinman describes an experiment in which

four sets of rats were fed different diets. The first set ate natural foods and drank

clean water. Throughout the three-month experiment, these rats remained alert, calm

and social. The second set was fed the same food as the first, with the addition of hot

dogs. These rats became violent and fought each other aggressively. The third set ate sugar-coated breakfast cereal and drank fruit punch. These rats became nervous, hyperactive and aimless. The fourth set was fed only sugar donuts and cola. These rats had trouble sleeping, became extremely fearful and were unable to function as a social unit. The poor nutrition of these foods (not to mention the toxic food additives) had a profound effect on the behavior of these animals. Many children today struggle with hyperactive, antisocial and even violent behaviors. The time has come to consider how their diet may be causing this behavior.

More Unreal Than Ever

As if our foods were not “make-believe” enough, modern technology has taken another unhealthy leap. We now have totally artificial, synthesized products that are consumed as “food.” The food industry is creating products such as artificial sweeteners (saccharine and aspartame) and man-made fats, including margarine, Olestra and nondairy creamer. As Paul Stitt, author of *Fighting the Food Giants*, wrote, “An ever increasing proportion of the food we eat is no longer even food but is now a conglomerate of high-priced chemistry experiments designed to simulate food.” More and more Americans are eating these fabricated, imitation, processed foods; if you want to eat a good diet, you cannot subsist on foods that are not real—foods that are completely foreign to the body.

What are the real foods that your body needs in order to become healthy and stay healthy? Your body needs nutrients: vitamins, minerals, amino acids, essential oils, oxygen, water, sunlight and fuel (calories). With the exception of water, air and sunshine, the nutrients necessary to keep your cells healthy must come primarily from the healthy plant and animal cells that you eat. If the fruits, vegetables, meats and other foods that you eat are not healthy, they cannot keep you healthy. If you are hoping for health, but eating a diet that is made up of unhealthy plants and animals, or foods so highly processed that they no longer resemble plants or animals, you are hoping for the impossible.

A professor of chemistry wanted to demonstrate the superiority of fresh foods to his class. He purchased “fresh” oranges at a local supermarket and measured their vitamin C content.

There was none!

Unpleasantly surprised, he traced the oranges back to their source. He found they had been harvested while still green, stored for two years and then artificially colored prior to being sold as “fresh fruit.” This is what the consumer is up against and why purchasing fresh, organic produce is so important.

One Size Does Not Fit All

The amount of nutrients required for optimal nutrition differs for every person and changes as a person’s life progresses. We are not genetic cookie-cutter replicas

of each other. In addition, individual factors can affect our nutritional needs, such as age, physical activity, climate, illness, injury, pregnancy or menstruation. Your need for calcium may be far higher than your neighbor's; your neighbor's requirements for vitamin C may differ widely from yours.

In his book

Nutrition Against Disease,

biochemist Roger Williams, Ph.D.,

reported on laboratory animals that were bred to have similar genes and,

theoretically, have similar nutritional needs. Yet, some animals were found to need

forty times as much vitamin A as others. Similarly, human nutritional requirements

operate across a wide range. Williams described another study performed on healthy

young men which demonstrated that their needs for calcium varied almost sixfold.

Does someone in your family catch colds and flus noticeably more often than

everyone else? Have you considered that his or her need for vitamin C (vital for

immune function) might be higher than everyone else's? Is vitamin C deficiency a

problem for them, not because they get less of it, but because they need more?

Researcher and Nobel laureate Linus Pauling was plagued with frequent colds and

flu all of his adult life until he started taking high doses of vitamin C. Likewise,

women have special nutritional needs (especially when pregnant or menstruating), as

do elderly people, athletes and anyone who is fighting off an infection or suffering

from a chronic disease. When it comes to nutritional needs, the “average person” does not exist.

Women are more likely to be nutritionally deficient than men.

Why? Because

women typically eat less food but still require roughly the same amount of nutrients.

That women are more susceptible to certain diseases—

including osteoporosis,

chronic fatigue syndrome and autoimmune diseases—is no coincidence.

Because of reduced activity and appetite, older people require fewer calories

(fuel), but they retain the same need for nutrients; in fact, nutritional needs may

actually increase with aging (not to mention that digestion of food and assimilation

of nutrients is often impaired in older people). Unfortunately, elderly people often

are less able to buy and prepare fresh foods, and they often subsist on packaged,

processed or frozen foods, thus consuming fewer nutrients.

This diet makes a bad

situation worse, contributing to widespread disease and disability among our older

population.

Almost certainly, you have, for at least a few nutrients, unique needs that are

substantially higher than average. More than a quarter century ago, medical pioneers

like Dr. Carl Pfeiffer were able to use this concept to cure many cases of “incurable”

schizophrenia by giving patients extra vitamins and minerals (above and beyond

what was available through a regular diet). With their nutritional needs being met,

Pfeiffer's schizophrenic patients were able to return to a completely normal life.

Such nutrient deficiencies are a major cause of the many mental and behavioral problems in our society.

Arbitrary Standards

Although science has proved that we have individual nutritional needs, at present

we have no way of measuring each person's needs. The Recommended Daily

Allowances (or RDAs) that are listed on foods and vitamin supplements are

arbitrary. They do not provide accurate information about what you need in order to

stay healthy. These standards are a measurement only of the minimum dosage

necessary to prevent a diagnosable deficiency disease, such as scurvy (a vitamin C

deficiency disease common to sailors who went too long without fresh fruits and

vegetables). You can easily meet RDA standards and still lack the nutrients

necessary to prevent other diseases not specifically known as "deficiency diseases."

In fact, optimal health usually requires at least several times the RDA values.

In reality, however, most people do not meet even these minimum standards. A

study by Professor Suzanne Murphy at the University of California, Berkeley,

published in the November 1992 issue of the Journal of the American Dietetic

Association,

measured the diets of 5,884 people for fifteen essential nutrients. The

average person consistently measured below two-thirds of the RDAs for three to six essential nutrients. A separate study, sponsored by the U.S. Department of Agriculture, examined ten essential nutrients in the diets of 21,500 people. In that study, not a single person was obtaining 100 percent of the RDAs for all ten nutrients on a daily basis—not one person out of 21,500! Virtually all Americans are chronically deficient in at least one and usually several nutrients, even when measured against the artificially low RDA standards. When we consider that good health requires several times the RDA, the true magnitude of the problem becomes apparent. That problem is compounded by the fact that nutrients must act as a team in order to keep you healthy. Of the more than fifty known essential nutrients, each must be available to the body on a daily basis and in the correct amounts and ratios to each other. Rather than acting by themselves, nutrients act in combination with each other; a shortage of even one starts a chain of events that can result in extensive nutritional deficiencies and body system malfunctions.

In

The Kellogg Report, Dr. Joseph Beasley examines how one specific nutrient deficiency (vitamin B

3

) has far-reaching ramifications: A vitamin B

3

deficiency

impairs absorption of vitamin C, which impairs absorption of iron, which causes excessive copper absorption, which inhibits nickel metabolism, which in turn adversely affects iron metabolism, and on and on.

If all those can occur from a deficiency of just one nutrient (vitamin B

3

in this

case), just imagine what happens in the bodies of most Americans, who are chronically deficient in several nutrients.

The most common deficiencies are calcium; zinc; magnesium; chromium;

vitamins A, E, C and B

6

; and folic acid. What you must recognize is that you cannot miss even one member of the nutrition package and hope to be healthy. The way to

assure you are getting what you need is to eat a wide range of real foods that are rich

in nutrition, keep the Big Four and other “make-believe” foods out of your diet, and

take high-quality nutritional supplements.

A Diet That Really Works

As a child growing up in a Boston suburb, I remember food shopping with my

mother at several farms in our town. The farmers maintained the mineral content of

their soils with traditional methods of crop rotation, mulch and manure. All through

the summer and even into the fall, those farms supplied our town with freshly

harvested, organically grown, fully ripened fruits and vegetables. Everybody in town

could share in the nutrition those small local farms provided.

By the late 1950s, all

the farms had been sold for housing developments, as happened to many small farms across the United States. From a real estate standpoint, subdivisions may be the best use of the land, but from a health standpoint, development is a disaster. Lost with those local farms was the superior nutrition contained within fresh, organically produced foods. What has replaced them are commercially produced, toxic, nutritionally deficient supermarket foods. Our biological ancestors ate living food directly as nature provided—often with no alternative. If you were hungry and found a berry bush, fresh berries were what you ate. Likewise, a hunter might eat an animal right after the kill, its flesh still containing living cells filled with vital nutrients. Nature works that way. Within these hunting and gathering parameters we evolved biologically; even today our nutritional needs are best served with living foods that are as unchanged as possible from the way nature provides them. Instead, we often settle for food in very different forms: cooked, dehydrated, ground, canned, frozen, hydrolyzed, hydrogenated, irradiated or otherwise modified. By eating a diet that consists primarily of these “altered” foods, we run the risk of being deficient in fundamental nutrients that are contained only within the whole, intact, living cells of other organisms. Your body needs to burn calories every day to provide energy. Although

Americans are seldom deficient in calories, almost always they are deficient in nutrients.

We must learn to count nutrients, not calories.

Your body builds more than ten million new cells every second. If the foods you eat do not contain sufficient nutrients needed to build and maintain those cells, an “eat more” message is sent to the brain. This happens regardless of how many calories are in your diet. A body that is starving for nutrients seeks out more food, and weight gain likely results. Eating just one hundred calories more than you burn, on a daily basis, translates to roughly twelve pounds of added fat per year. Try that ten years in a row!

Many Americans are both malnourished and overweight. Obesity is a major health problem in America today, regardless of age or economic status. According to recent government statistics, 63 percent of American adults are overweight. When you eat real, nutritious foods (typically lower in calories), your body obtains the nutrients it needs and you likely do not have intense food cravings. If a large part of your diet is made up of real foods, becoming overweight is difficult. Unfortunately, overweight people (or those wishing to avoid becoming overweight) often cut down on their overall food (calories) intake, without making changes in what types of foods they eat. This results in more malnourishment and

stronger food cravings. Consuming 2,000 calories yet obtaining little or no nutrition is frightfully easy: a small candy bar (280 calories and almost no nutrition), two soft drinks (600 calories and no nutrition), and a hamburger/fries/shake meal (1,180 calories and only a little nutrition). This intake totals 2,060 calories yet offers a serious case of malnutrition. That diet provides some protein, carbohydrate and fat that the body can use—but is seriously lacking in vitamins, minerals, phytonutrients, enzymes, fiber, essential fatty acids and other nutrients necessary to construct healthy cells and maintain good health. Lacking these nutrients, the body must deplete its nutrient reserves in order to keep functioning. When the reserves run out, cells suffer from deficiency, and they cease to self-regulate and self-repair. Disease follows. Meanwhile, you are still hungry and adding more weight because your body is short of nutrients.

Magic Capsules

How do real foods support the health and function of your cells whereas processed foods do not? Here's one example: Whole grains (such as wheat, oats, millet and quinoa) are seeds that contain all the ingredients necessary to create a new plant—to create a new life. They are like magic capsules. The nutrients in these capsules that are necessary to create life are also necessary to sustain your life. However, as soon as this life-creating capsule has been opened (due to cutting, mashing or grinding),

oxygen reacts with the chemicals inside, causing the nutrients to deteriorate. At this point, the seed can no longer produce a new life, nor can it sustain yours as well as before. Our ancestors did not have such nutrient losses in their grains, which were eaten whole or coarsely ground, rather than processed into nutritionally worthless white flour. Remember the Hunzas? They coarsely ground grains and immediately made nutritious flat breads, minimizing nutrient loss. Foods that are nutritious but nontoxic come from the following categories:

- Organic foods produced naturally without any man-made chemicals, such as pesticides, herbicides, fertilizers, preservatives, antibiotics, hormones, processed animal feed, etc. These foods are generally higher in nutrients and lower in toxins than nonorganic (commercially produced) foods of the same type.

- Fresh foods harvested at their peak of nutrition (ripeness) and consumed shortly thereafter. Food that is harvested does not gain any more nutrition (even though it may continue to ripen), and in fact, nutrition begins to decline. Some foods deteriorate more quickly than others, but the point is that you want to eat your food as soon after harvesting as possible. The more the food sits around (during harvesting, storage, transportation and distribution), the more nutrition it will lose.

•
Unprocessed foods,
minimally altered from the way that nature provides.
Avoid foods that are cooked, peeled, cut, ground, dehydrated,
frozen, canned,
etc. Unprocessed foods are whole, complete foods, rather than
just part of a
food (whole grains instead of flour made from grains, for
example, or potatoes
with the peel still on).
Because we cannot all revert to hunting, gathering, growing
our own food and
eating it fresh and raw, we must learn to evaluate the foods
that are available to us
and make choices that are both healthy and realistic. We must
take the “black and
white” nutritional knowledge outlined above and apply it to
our lives in the best
shade of gray that we can.

Poisoned in the Nursery

Much of the nutrition trouble we face begins before food
leaves commercial
farms. Modern agricultural practices and chemicals (such as
chemical fertilizers,
insecticides, herbicides and fungicides) produce ever-
increasing quantities of food,
but the chemicals reduce the nutritional quality of the food
and deplete the soil of
nutrients needed to produce future quality crops.
Chemical fertilizers, which are supposed to put nutrients into
the soil, actually end
up causing nutrients to be removed from the soil. The most
common chemical
fertilizers, which support high food production, add three
major nutrients to the soil:

nitrogen, phosphorous and potassium. But the plants require many other nutrients absorbed from the soil, such as zinc, calcium, magnesium, selenium, germanium, chromium, manganese, nickel and molybdenum. Chemical fertilizers do not supply these nutrients. By not replacing these nutrients and by growing more food on the same land year after year after year, critical nutrients continually are lost from the soil, leading to nutrient-deficient soil, nutrient-deficient crops, nutrient-deficient farm animals and nutrient-deficient human beings.

In her 1976 book *The Living Soil*, Lady Eve Balfour describes an eighteen-year experiment on three farms with similar soil profiles. One of the farms was managed organically, one chemically, and the third, a mixture of the two. During this eighteen-year study, the soil on the organic farm was found to have the highest mineral content. Not coincidentally, the dairy herd on that farm was healthier, produced more milk and had higher reproductive capacity. The use of chemical fertilizers triggers a series of problems as plants struggle to cope with deficient soils and toxic attacks. Plants grown in nutrient-deficient soils are less healthy and more vulnerable to insects, molds, fungi, viruses, bacteria and weeds. The susceptibility leads to the use of other agricultural chemicals, such as pesticides, herbicides and fungicides, to protect sick plants. These toxic chemicals

create “dead soils,” killing not only the undesirable organisms but also the helpful organisms (earthworms, insects, bacteria and fungi) that are responsible for taking minerals out of the soil and converting them into forms that plants can use. When these bacteria and fungi are killed, the plants no longer receive adequate nutrition. Insecticides, fungicides and herbicides accumulate in the soil to a level where they inhibit plant growth. These poor growing conditions have spurred the development of new kinds of plants, such as hybrid and genetically modified crops. In creating genetically modified plants, which humankind has never eaten before, we may have (unknowingly) altered the nutritional value of the plants, as well as made them more toxic or allergenic. More and more genetically modified foods are contaminating the food supply with novel and unnatural varieties of organisms. (See chapter 9 for more information.)

Shelves Stocked with Old Food

I can remember, as a child on my uncle’s farm, picking ripe apples from the trees and eating them then and there. I can remember harvesting fresh peas, strawberries and sweet corn from our own garden and eating them raw within minutes of harvesting. Not only do fresh foods taste better; they are substantially better for health. Much of the food purchased in a standard supermarket today is old. Presumably fresh produce such as apples, oranges and cucumbers are put in cold

storage and can be anywhere from months to years old.

Supermarket eggs are commonly anywhere from six weeks to six months old, and they still can be labeled as “fresh.”

Food is reasonably hardy, but nutrients are not. Nutrients are quite fragile and are destroyed by heat, light, oxygen and overly long storage. The most fragile vitamins

are C, B

¹

and B5. Unless you grow food yourself or obtain it freshly harvested from

a local farmer, it's likely the food does not have the nutrition you think it has.

Irradiated foods may be years old before you eat them and thus completely devoid

of vitamins. Fruits and vegetables undergo substantial destruction of nutrients in

modern cold storage. In

The Kellogg Report,

Dr. Joseph Beasley offered examples of the nutritional loss that occurs after harvesting:

- Spinach and asparagus lose 50 to 70 percent of their folic acid when kept at

room temperature for three days.

- Vegetables such as asparagus, broccoli and green beans typically lose 50

percent of their vitamin C before they reach the produce counter.

- Potatoes lose as much as 78 percent of their vitamin C during long-term

storage at 36°F.

- Blanching of vegetables prior to freezing can destroy up to half of the vitamins.

- Freezing meat can destroy up to 70 percent of its vitamins.

Commercial, make-believe foods lack nutrients not only because of losses after harvest, but also because food is frequently harvested before it is ripe. This practice may be necessary for our modern distribution system (to bring food to the consumer before it rots), but early harvesting also reduces nutrition. The ripening process is critical to develop the full vitamin and mineral content of a food; vitamin and mineral content rise near the peak of ripeness. Also, flavor improves. The carrots you buy in the supermarket may look ripe, but they frequently turn

that bright orange (ripe) color during transit through the distribution system. If they are not ripened while still in the soil (and most are not), they will lack essential nutrients. Vine-ripened, freshly harvested tomatoes are loaded with vitamins, minerals and phytonutrients (natural chemicals in plants that benefit our health)—unlike commercial tomatoes that are picked green and artificially ripened with ethylene gas. Naturally ripened tomatoes were found to contain one-third more vitamin C than those harvested green and immature. Foods harvested before they are ripe never develop certain nutrients at all. Certain phytonutrients (substances found in ripe tomatoes known to help prevent diseases such as cataracts, macular degeneration and even cancer) are lacking in the typical supermarket tomato because these substances develop in the last stages of ripening.

While having all kinds of food available to us all year round is wonderful, we pay the price with our health because the food must often be harvested before it is ripe, transported long distances, stored for long periods and artificially ripened. Even though such foods may look and taste fine, they are substantially less nutritious. They are “make-believe” foods.

Beware of Food Guillotines

Even foods that are truly fresh and ripe can nevertheless be nutritionally destroyed if you prepare them improperly. Our biological ancestors usually did not cook or process their foods. Foods were eaten fresh and raw. The healthy Hunzas ate 80 percent of their diet raw. Their foods not only had more nutrition to begin with (because of traditional farming techniques and rich soils), they also did not typically diminish that nutrition by cooking. Nobel laureate Linus Pauling believed that the mostly raw, mostly vegetarian, unprocessed diet of our biological ancestors provided a level of nutritional quality far superior to the food supply available today. The bulk of the modern American diet comes from processed foods that have been deliberately altered from the way nature provided. This altering includes trimming, peeling, chopping, blending, mashing, commercial refining and cooking. While some degree of processing may be necessary, there are many degrees of processing, from the simple slicing of a carrot for your salad all the way to the grinding and

bleaching of wheat in order to make white flour. The most significant causes of malnutrition, other than commercial farming and distribution techniques, are cooking and processing.

In general, proteins in food are the most stable (less damaged by processing), while vitamins are the most easily damaged. A cucumber loses a quarter of its vitamin C just by slicing it to make a salad. If the salad stands around for an hour, the loss goes up to a third, and if it stands for three hours, half its vitamin C will be gone.

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The heat used in cooking foods damages nutrients and typically makes them more difficult to digest. Cooking even damages protein (the most hardy of nutrients).

Consider oatmeal: In the Food and Nutrition Encyclopedia, Aubrey Ensminger reported that dry oatmeal contains 14 percent protein, but that figure drops to only 2 percent after it is cooked—a loss of 85 percent. Cooking common vegetables, such as carrots, can cause losses of 75 percent of the vitamin C, 70 percent of the vitamin

B₁, 50 percent of the vitamin B₂ and 60 percent of vitamin B

The higher the heat and the longer the cooking time, the more nutrients your food loses.

Heating food deactivates its enzymes (the cellular machinery that manufactures all the products our cells make). Although the human body is capable of making its own enzymes, we also receive enzymes directly from our food. Cooking destroys these enzymes. Eating cooked foods stresses the body, which must manufacture extra enzymes in order to digest food and compensate for enzymes lost in cooked food. By eating cooked foods, you can actually lose more nutrients than you gain.

Consuming sufficient enzymes is one reason that eating raw foods is so important.

Cooked foods contribute to our epidemic of chronic disease.

Although the health benefits of raw foods need emphasis, a few words of caution

are important about raw animal products (such as eggs, meat, fish and poultry). Even

though nature intended us to eat raw foods—animal products included— today's

hazards of bacterial, viral and parasitic infections make raw animal foods dangerous.

Also, raw animal foods must not touch other foods intended to be eaten raw.

Even just a few generations ago, people typically ate more raw food than they do

now, and the trend toward cooked and processed foods appears to be worsening.

According to U.S. Department of Agriculture statistics, over the last century average

consumption of fresh apples declined by more than three-fourths, fresh cabbage by more than two-thirds and fresh fruit by more than one-third. During that same period, consumption of processed vegetables went up hundreds of percent and consumption of processed fruits went up by about 1,000 percent.

Eating processed fruits and vegetables (canned, dried, frozen, etc.) is fundamentally inferior to eating fresh fruits and vegetables.

Eat for Your Future, Too

The nutritionally deprived, cooked and processed foods you eat today will damage your health tomorrow, as well as the health of your unborn children and grandchildren in the years to come.

This profound concept was demonstrated in the 1940s by Francis Pottenger Jr., M.D., and published in his book *Pottenger's Cats*.

More than nine hundred cats, some fed a diet of raw food and some a cooked-food diet, showed striking differences in their own health as well as the health of their offspring. Within six months, the cats eating the cooked food developed numerous health problems.

Subsequent generations suffered infections, dental problems, vision problems, skin problems, allergies, arthritis, miscarriages and behavioral changes—including nervousness, viciousness and violent behavior. Each new generation was sicker than

the last. By the third generation, almost all the cats suffered from allergies and had trouble reproducing because of miscarriages and stillbirths. Meanwhile, the cats on the raw-food diet remained healthy and well-behaved, generation after generation.

We have much to learn from Pottenger's work; the most significant (and ominous) implication is the impact of poor nutrition, supplied by cooked food, on the health of future generations.

Another case dramatically proves the need for raw, fresh foods. During World War I, sailors aboard a German cruiser, Kronprinz Wilhelm, ate beef, ham, bacon, cheese, potatoes, canned vegetables, dried peas/beans, white bread, margarine, tea, coffee, sugar, condensed milk, cake, champagne and beer. Their entire diet consisted of cooked and processed foods. After six months on this diet, the crew was experiencing shortness of breath, paralysis, atrophied muscles, enlarged hearts, constipation, anemia, and muscle and joint pain. Fifty men could no longer stand.

After eight months, 500 were sick, 110 were bedridden, and they were falling at a rate of four per day. New symptoms included pleurisy, rheumatism, pneumonia and other infections, and fractures and wounds that would not heal.

An emergency stop in Virginia brought a new diet containing some raw fruits and vegetables. After ten days, the men stopped falling sick; forty-seven had been

discharged. Conditions gradually improved thereafter. Access to fresh, raw food was all it took. Notably, the only people on the ship who did not get sick were the officers who had ongoing (if limited) access to raw fruits and vegetables, apparently providing just enough nutrition to make the difference between health and disease. Think of all the people that you know who suffer from allergies, gum disease, heart problems, vision problems, arthritis, antisocial behavior, miscarriages and other health problems. Could malnutrition, perhaps even the malnutrition of their parents or grandparents before them, be contributing to their problems? Talk to those people you know who have lived in good health into their eighties, nineties or even older. Chances are they grew up on farms and ate plenty of raw, real food during their developmental years. By contrast, consider the deteriorating health of many people in the baby boomer generation—the first humans to develop eating processed, “TV dinner” diets starting in the 1950s. Families today often have grandparents that lived (or are still living) into their nineties, while the next generation is getting sick and dying in their seventies or sixties. Today’s young people are plagued with problems such as cancer, asthma, diabetes, allergies, obesity, poor eyesight, dyslexia, birth defects and other problems, and are likely to die at even younger ages. An epidemic of allergic disease

is occurring in industrialized countries, especially in people born after 1960. The prevalence of asthma has quadrupled over the last two decades. Could something as simple as nutritional deficiency be a major contributor to violent behavior and vicious crimes? Many reasons exist to believe so. Many of our young people can no longer reproduce; some estimates are as high as one in five. These problems were rare just a few generations ago when our grandparents and great-grandparents were eating more organic, fresh, and unprocessed raw foods. These problems did not exist among well-nourished populations such as the Hunzas.

How You Eat Matters

Millions of Americans are plagued with heartburn, abdominal pain, bloating, gas, nausea, bowel difficulties and other digestive problems. Much more than inconvenient, these are telltale signs of poor digestion—resulting in deficiency and toxicity, i.e., disease. To eliminate these problems, follow a few simple guidelines, which will support healthy digestion. You can choose digestion habits that will bring nutrients into your cells and let wastes out of your body efficiently.

The basic steps of good digestion are as follows: First, eat the right combinations of foods, because certain foods digest better together than others. Next, chew your food well, to assist in the digestive process. Nutrients must be absorbed properly through your intestinal walls and transported throughout your body to all the cells

that need them. Finally, wastes must excrete from the body. Any interference with any of these steps of the digestive process can cause both deficiency and toxicity. Deficiency may occur if food is not properly digested and absorbed. Toxicity occurs when undigested food “sits” too long, either in the stomach or in the intestines, where it rots, ferments and putrefies, creating toxins. Although eating a variety of foods is a great idea, we are not designed to digest them all at the same time. Learning which foods go well with each other is what “food combining” is all about. Our digestive systems have adapted and evolved over many thousands of years; until recently humankind did not eat the combinations of foods that are now “normal” to us. Our hunter-gatherer ancestors often ate foods directly from their source, usually one at a time because there was no way to preserve or store them. Our ancestors certainly did not cook up three- or four-course meals that combine all sorts of different proteins, starches, sugars, fruits and vegetables. When we are young, our digestive systems are working at peak performance and indulging in digestive indiscretions may be possible. As we age, digestive capacity diminishes. Forcing the body to digest incompatible foods results in improperly digested food that produces dangerous toxins. Also, undigested food deprives us of essential nutrients.

Food combining principles are important because each food category has different digestive requirements. The requirements for proteins and starches are radically different; if you eat them both at the same time you cannot digest either one well.

Proteins digest in an acid environment, whereas starches digest in an alkaline environment. Your digestive system has the ability to create either environment, but cannot create both at the same time. Instead, combine proteins or starches with vegetables, which are highly nutritious and combine well with either one.

Fruit has special digestive requirements and should be eaten alone. Fruit is easy to digest and is meant to pass through the digestive system quickly. If not, such as when combined with protein or starch, the fruit sugar ferments in the stomach, often manifested by bloating and gas. If sweet and acid fruits are to be eaten together, eat the acid fruits first. Melons should be eaten alone or combined with other melons because they take even less time to digest than other fruits and should pass quickly through your digestive system in order to prevent sugar fermentation.

To learn about food combinations that work well together and those that do not, consider a few simple food categories: proteins, starches, vegetables, and three kinds of fruits (sweet, acid and melons). Remember these simple rules:

Vegetables with proteins, okay.

Vegetables with starches, okay.

No protein with starch (avoid meat and potatoes, spaghetti and meatballs, fish and rice, etc.).

Eat fruit alone. (Acid fruits with nuts and seeds, okay. Acid fruits with sweet fruits, okay, although acid fruits should be consumed first. Eat melons alone, except with other melons.)

Not certain which of your favorite foods fall into which categories? Here are examples:

Protein

Eggs, meat, fish, fowl, nuts, seeds, avocado, coconut, sprouts, milk products.

Starch

Corn, wheat, barley, rice, buckwheat, millet, oats, dried peas and beans, potatoes, yams, squash, flour (pasta/bread/pastries), sugar (candy/soft drinks/etc.).

Vegetables

Asparagus, tomatoes, okra, green beans, green peas, broccoli, bell peppers, brussels sprouts, cabbage, lettuce, celery, cucumber, beets, egg-plant, artichoke, beets, carrots, cauliflower, chives, ginger, garlic, leeks, onion, shallots, scallions.

Sweet Fruits

Bananas, currants, figs, dates, raisins, prunes, dried fruits, grapes.

Lemons, oranges, grapefruits, other citrus

Acid Fruits

fruits, kiwi, plum, pineapple, mango, papaya, all berries, nectarines, apples, cherries, pears, apricots, peaches.

Melons

Cantaloupe, casaba, crenshaw, honeydew, banana melon, watermelon.

Many of our traditional meals are comprised of wrong combinations. What we think of as a “good meal” is typically a harmful combination of starch and protein—meat and potatoes, a burger and fries or a cheese pizza. We make the problem worse

by accompanying meals with sugary drinks and desserts; these combinations cause the food to ferment and putrefy in the digestive system (and the protein/sugar combination also results in the formation of harmful AGEs—as described in the sugar section of the Big Four). Learning how to apply proper food combinations to your diet can help your health, as it did for Andrea. Her high-profile career was interrupted when chronic fatigue and an autoimmune syndrome called lupus overwhelmed her. Before she came to see me, Andrea had been sick for five years and had exhausted all the remedies that modern medicine had to offer—with no help. I encouraged Andrea to keep a food diary so that we could track what she was eating. The diary revealed that Andrea's diet consisted of a lot of processed junk ("make-believe" food). I taught her how to shop for "real" food and suggested special vitamin supplements. Within one week this woman—who had been chronically ill for five years—was starting to feel much better. She gained more energy and more mental clarity, and she began to have hope. Then she reached a plateau and seemed unable to make further improvement. I suggested that Andrea prepare another food diary, this time looking at the combinations of foods she was eating. We found out why her recovery process stalled. Andrea's meal choices were causing maldigestion and creating toxins that

were inhibiting her recovery. For example, she had gone out to a Sunday brunch and ate a breakfast consisting of a vegetable omelet (protein and vegetables, okay), hash-brown potatoes (starch with protein, not okay), toast with jelly (starch and sugar with protein, not okay), and a fruit cup (fruit with other foods, not okay). Combining egg protein with the starch of bread and potatoes was bad enough; the fermentation caused by combining that with sugar from fresh fruit and jelly made things worse. By maldigesting her food, this meal was not supplying Andrea with the nutrition she thought she was consuming. At the same time her choices were creating toxins that were poisoning every cell in her body—certainly not what she had in mind when she ordered brunch. At another meal, Andrea had a sandwich made of organic, whole-wheat bread, organic turkey and organic lettuce. While definitely better than the breakfast, combining starch (bread) with protein (turkey) just does not work. I knew how important it would be for her health if she had a good understanding of basic food-combining rules. I taught her the simple rules of food combining: vegetables with protein, okay; vegetables with starch, okay; no protein with starch; eat fruit alone. Andrea put these simple rules to work. Her health continued to improve, and she went into complete remission of all her chronic health problems—something she

had been unable to do even with good food and supplements alone. Proper food combining was critical to this woman's wellness process, which is no surprise, because improper food combining causes disease.

It's All in the Technique

When you eat cooked foods, eating something raw first is best.

Cooked food appears to be so alien to the human system that it can provoke an immune response, as if you are being exposed to a virus. Scientist Udo Erasmus, author of *Fats and Oils*, wrote:

[W]hen cooked (or dead) food is eaten, a defense reaction occurs in the tissues of the stomach and digestive tract. This reaction is similar to the reaction we find in infections and around tumors and involves the accumulation of white blood cells, swelling, and a fever-like increase in temperature of the stomach and intestinal tissues. [As a result, we] experience tiredness after the meal. The same reaction takes place when half the food is eaten raw, but the cooked part is eaten first. When the raw part of the food is eaten first, however, this reaction does not take place.

Chewing your food also is important. The style that many people use is "chomp, chomp, gulp—down the hatch!" Lack of proper chewing can cause maldigestion and

contribute to disease. Many of our modern foods are easy to gulp down, requiring little help from the teeth (because of excessive cooking, processing and fat content).

By contrast, real foods (whole foods and especially raw foods) tend to have more texture and fiber, and require more chewing. If you want good nutrition to support good health, you need to eat real food and you need to chew it well.

First, your teeth physically mash food into small particles.

Then, your saliva

combines enzymes with food as it is being chewed and helps to break down and

digest it. The purpose of chewing is not simply to break the food into small enough

chunks to swallow, although many people eat this way. The purpose of chewing is to

assist the digestive process by grinding your food into small particles and coating

them thoroughly with the digestive enzymes in your saliva.

There is an old saying: “Drink what you eat and eat what you drink.” Solid food

should be chewed thoroughly enough that it becomes liquid before you swallow it;

liquid foods (such as juices and soups) should be “chewed” so that the enzymes in

your saliva have time to work on them. Nutrition starts in your mind and in your

mouth. Eat your food with the intent to nourish your body, rather than merely to fill

the void in your stomach.

Rethink “Acid Indigestion”

After leaving the mouth, the chewed, enzyme-coated food moves to the stomach

and triggers the release of hydrochloric acid and other digestive chemicals that further break down the food before it moves into the small intestine. In fact, until sufficient hydrochloric acid is present and food breakdown takes place, food does not leave the stomach. If undigested food sits in the stomach too long, it forms toxins and poisons you. Adequate hydrochloric acid is critical in the digestive process.

People often think that indigestion is caused by “too much acid”—commonly called “acid indigestion.” While in some rare cases this diagnosis is valid, the overwhelming majority of acid symptoms originate from the opposite problem—too little hydrochloric acid. As a result, the food does not digest properly and remains in the stomach too long, whereupon the food rots and becomes acidic. Rotting food, not excessive digestive acids, causes an acid burn feeling. Deliberately taking antacid tablets before you eat, to prevent acid indigestion, is not a good idea.

It only makes a bad situation worse. The best remedies for acid indigestion are to pay attention to basic food combining principles and to chew your food well. Supplementing with digestive enzymes also can be helpful. (Note: Supplementing with hydrochloric acid tablets is also possible, but this much more aggressive measure requires education and careful monitoring.)

Most absorption of nutrients takes place in the small intestine. By the time it reaches the small intestine, food must have undergone proper digestion. The small intestine extracts nutrients from the food and they enter the bloodstream. Waste products move along to the large intestine where they are excreted from the body. Food not properly processed by the time it reaches the small intestine creates a host of problems. Poorly digested, putrefying, fermenting and rotting food particles in the intestines create vast amounts of toxins. Undigested food molecules can pass through the intestinal walls and move directly into the bloodstream. In the bloodstream the body recognizes these food molecules as foreign. The immune system may attack them. This response resembles a classic food allergy; poor digestion of a food can cause you to become allergic to it. Worse, each allergic reaction damages the intestinal tissue and makes it more permeable, perpetuating the problem. An increasing number of food allergies and numerous other health problems may result. These ongoing allergic reactions can overtax and exhaust the immune system, making you vulnerable to low-grade, chronic infections, such as chronic sinus infections. Provided the digestive process goes well in the intestines, allowing the proper nutrients to enter the bloodstream, those nutrients must still go to the proper cells

and then inside those cells. This activity often requires separate “transporter nutrients” (certain amino acids, for example) that also come from your diet. In other words, nutrients are used for many purposes, including delivery of other nutrients. This is one example of how nutrients work together in tandem, and why you cannot afford to miss a single one. Once the necessary nutrients have arrived at the target cells, they still need to pass through the cell membranes. If the membrane is not constructed properly (as described in the fats and oils section of the Big Four), new problems arise. Nutrients can have a difficult time being transported through cell membranes constructed from “bad” fats and oils (hydrogenated oils, refined supermarket oils, deep-fried foods and excessive saturated fats).

The final step in proper digestion is the elimination of waste products, which must be eliminated as quickly and efficiently as possible. Otherwise, toxins may reabsorb back into the body. The best ways to improve bowel function are to eat sufficient fiber, follow proper food combining and chew food well. If you select a food with good fiber content and then cook it, however, you may be short-changing yourself. Some of the fibrous structure of food can be lost in the cooking process, so be sure not to overcook. Many people find it uncomfortable, even embarrassing, to talk about their body’s

waste products. Being comfortable with these natural processes is important because one of the simplest ways to measure the health of your digestive system is to be aware of your bowel movements and to note the quality of your stools, in terms of frequency, texture and odor. Most Americans are constipated; many have a bowel movement only every other day or think that one movement per day is ideal. Not true. If you do not have frequent, efficient elimination, then food wastes remain in your intestines, where they putrefy and poison you. Optimal is two or three bowel movements a day—one, at the very least. Loose stools or exceptionally dense stools are reflections of serious problems, especially if they persist. Well-formed and floating is a good rule of thumb. Excessive gases (stomach or intestinal) or stool odor also may indicate digestive trouble. Be aware of your elimination process, and if you have a problem, take steps to remedy it by following the guidelines in this chapter.

Choosing the Right Dietary Supplements

Eating good foods and digesting them well may not be sufficient to make sure your cells receive all the nutrients they need every day. Supplementing your diet

with high-quality vitamin, mineral and essential fatty acid supplements is also important.

Supplements have become a necessity in our society for two reasons: First, the supply of nutrients is down. Intensive commercial farming, depleted soils and food processing have reduced the nutritional content of our food so dramatically that our diets no longer contain the nutrients required by our cells to maintain good health. Second, our need for certain nutrients is up because of the effects of environmental pollution, which puts extra stress on the body. Responding to this stress uses up essential nutrients, in particular antioxidants, such as vitamins A, C and E. With the supply of nutrients down and the need for nutrients up, is it any wonder that three out of four Americans have a diagnosable chronic disease? Supplementation is necessary to bridge the gap between what we need and what comes from our diet. Most physicians (who, on average, receive only two and a half hours of nutritional training during four years of medical school) often tell you that supplements are not necessary— that they make little more than expensive urine. The position often taken by physicians is that you can get all the nutrition you need to maintain health by eating a balanced diet of commercially produced foods. You know by now that this claim is absolutely false. Numerous studies have shown that virtually all Americans are not receiving the recommended amounts of nutrients on a daily basis. Many nutritional researchers

(myself included) believe that, in our modern world, obtaining the nutrients we need from diet alone, even if we eat good foods, is impossible. Over the last quarter century, research has established that a huge gap exists between the small amounts of nutrients required for preventing overt nutritional-deficiency diseases and the large amounts of nutrients required to maintain optimal health and fortify our bodies against disease in general. Dietary supplements help fill the gaps in your nutrition, especially in those nutrients for which you, as an individual, may have a particularly high need. One final note: Supplements are not an invitation to eat a poor diet; they are to be used in addition to healthy foods. Countless people have been cured of chronic health problems by the addition of dietary supplements. Consider Albert, a man who sought my advice several years ago. Albert had been suffering from serious, “untreatable” depression for almost a decade. He had exhausted his resources going to hospitals, clinics and physicians, but nothing had helped. His life was a living hell, and he was suicidal. At our first meeting I learned that he subsisted on a meager diet consisting mostly of processed foods and that he was addicted to sugar. I suggested that he eliminate sugar and incorporate fresh, raw fruits and vegetables into his diet. I recommended a supplement program of specific vitamins and essential fatty acids. Albert was

skeptical that these seemingly simple suggestions would make any real difference, considering how many “expert doctors” he had already seen. In less than a week